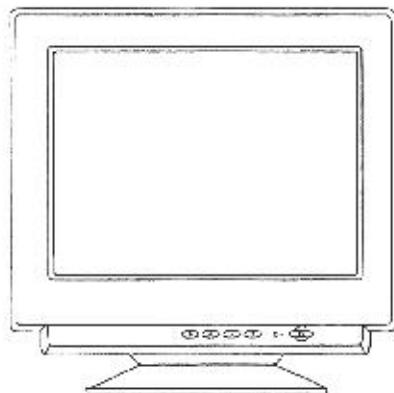


Service Manual

MODEL V773-1M / -1E V773-6M / -6E
(M-1734QU-M / -E M-1734QU-NM / NE)

Please file and use this manual together
with the service manual for Model 1769GS-2.
Order No. FTD960305329

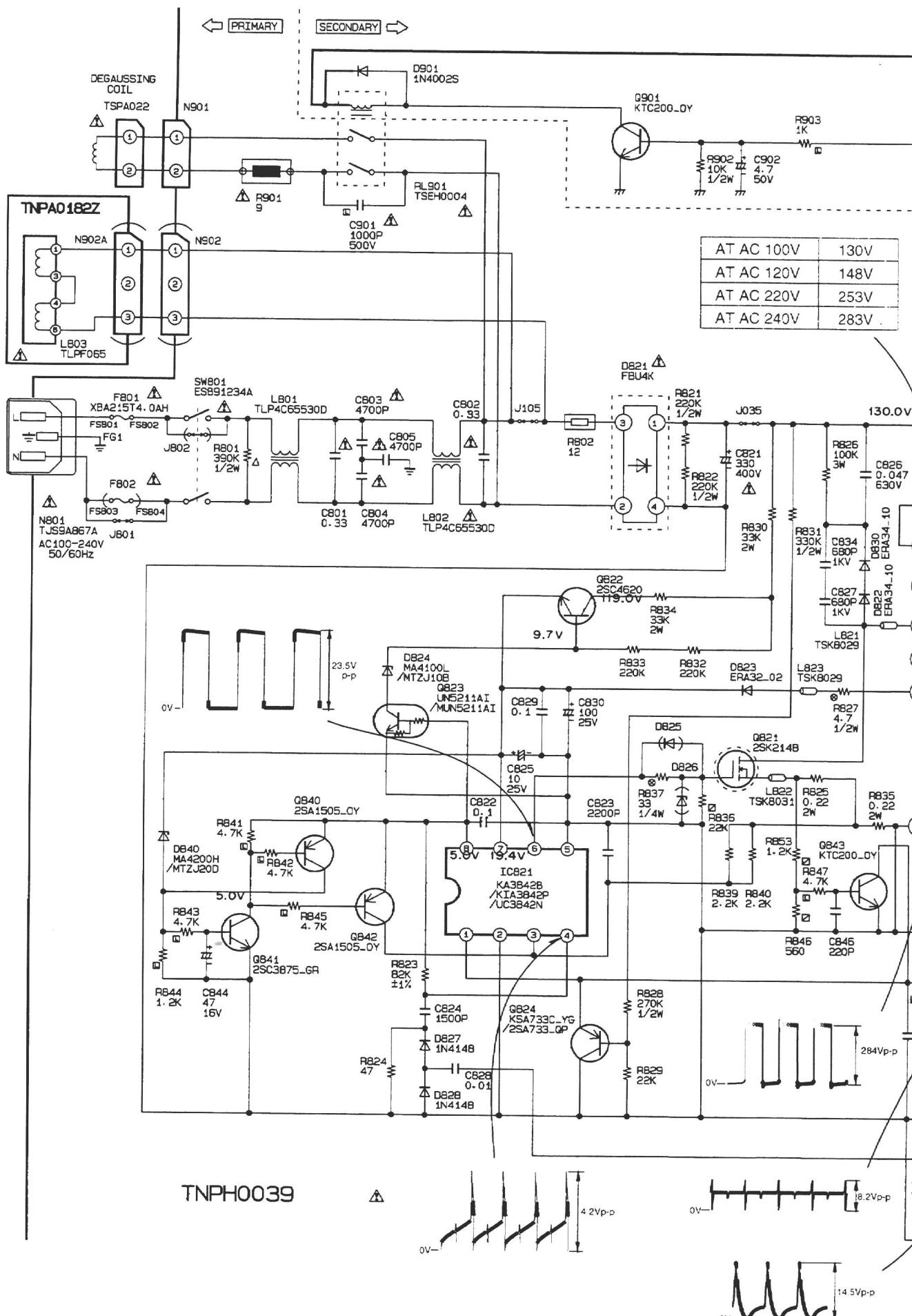


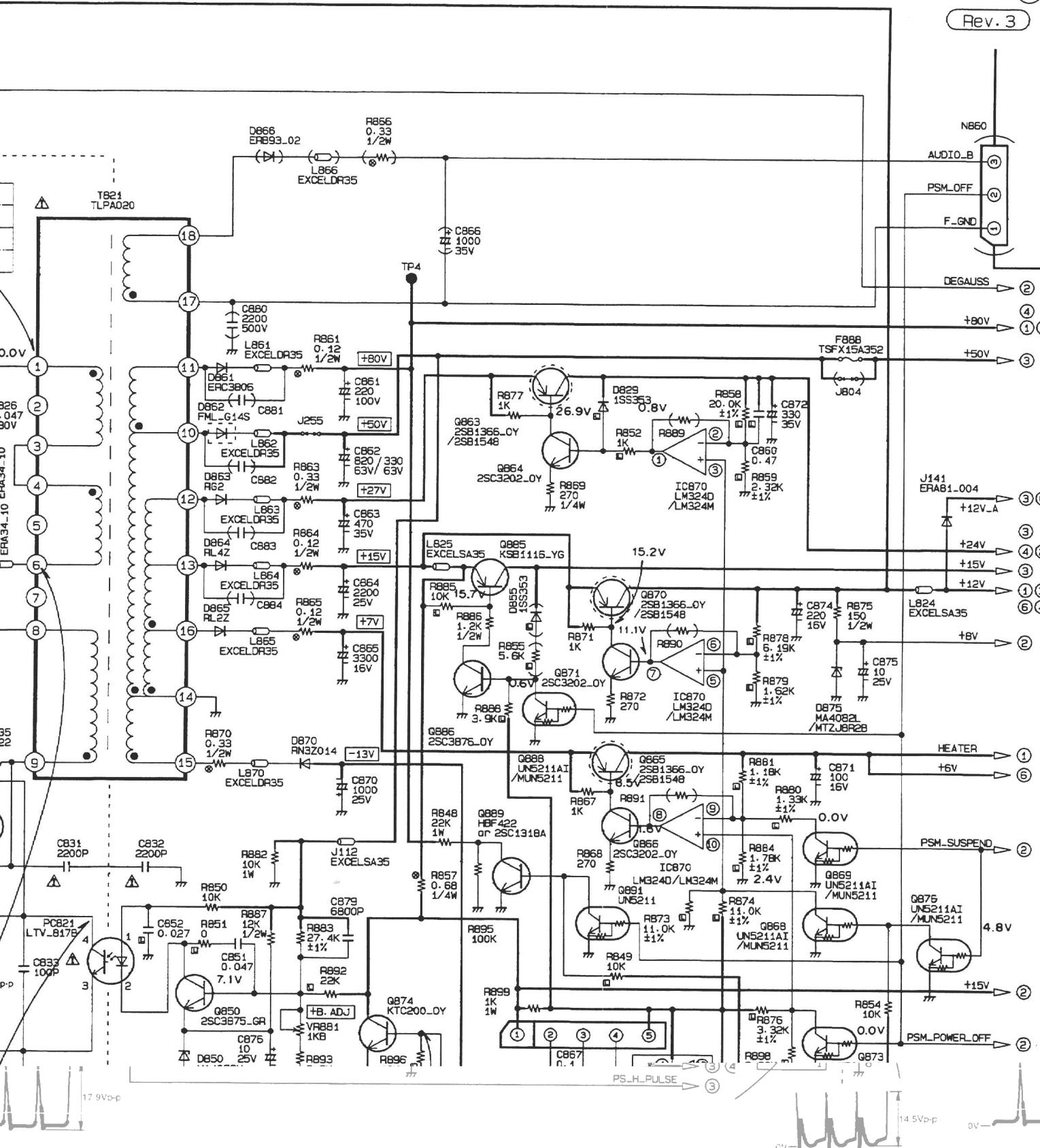
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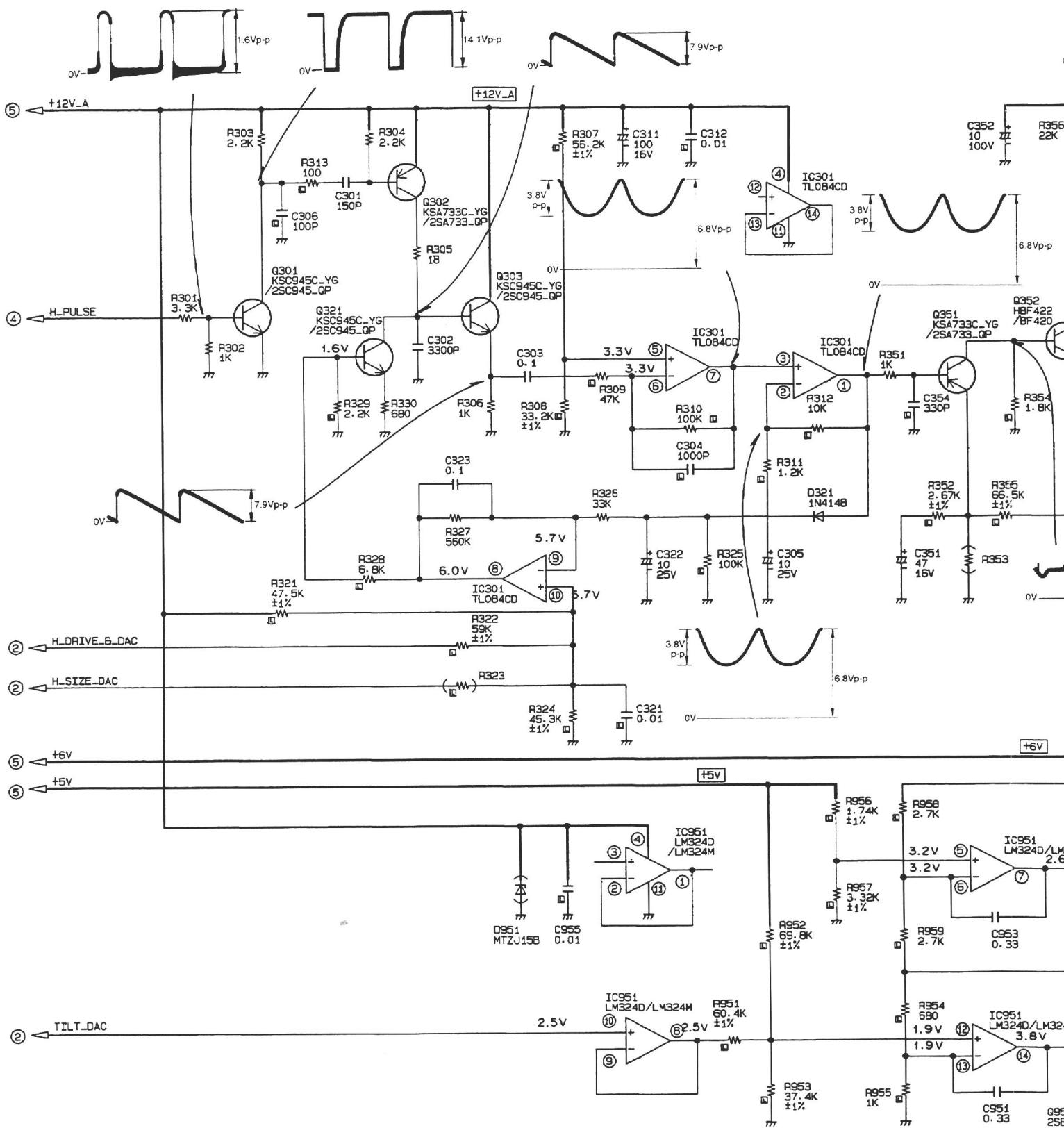
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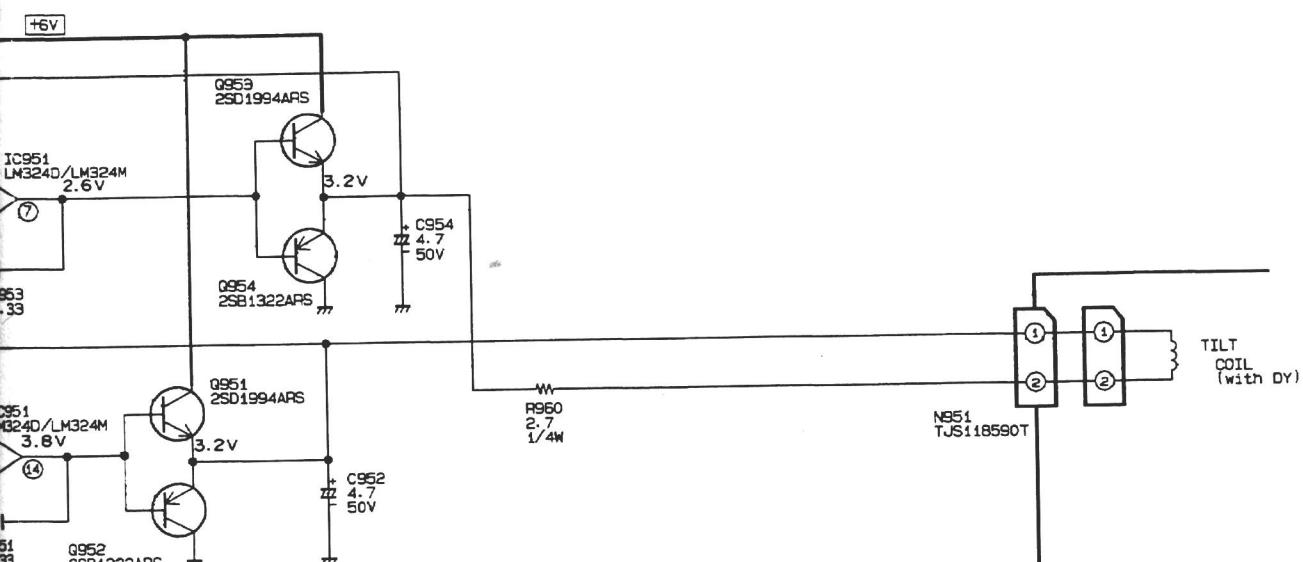
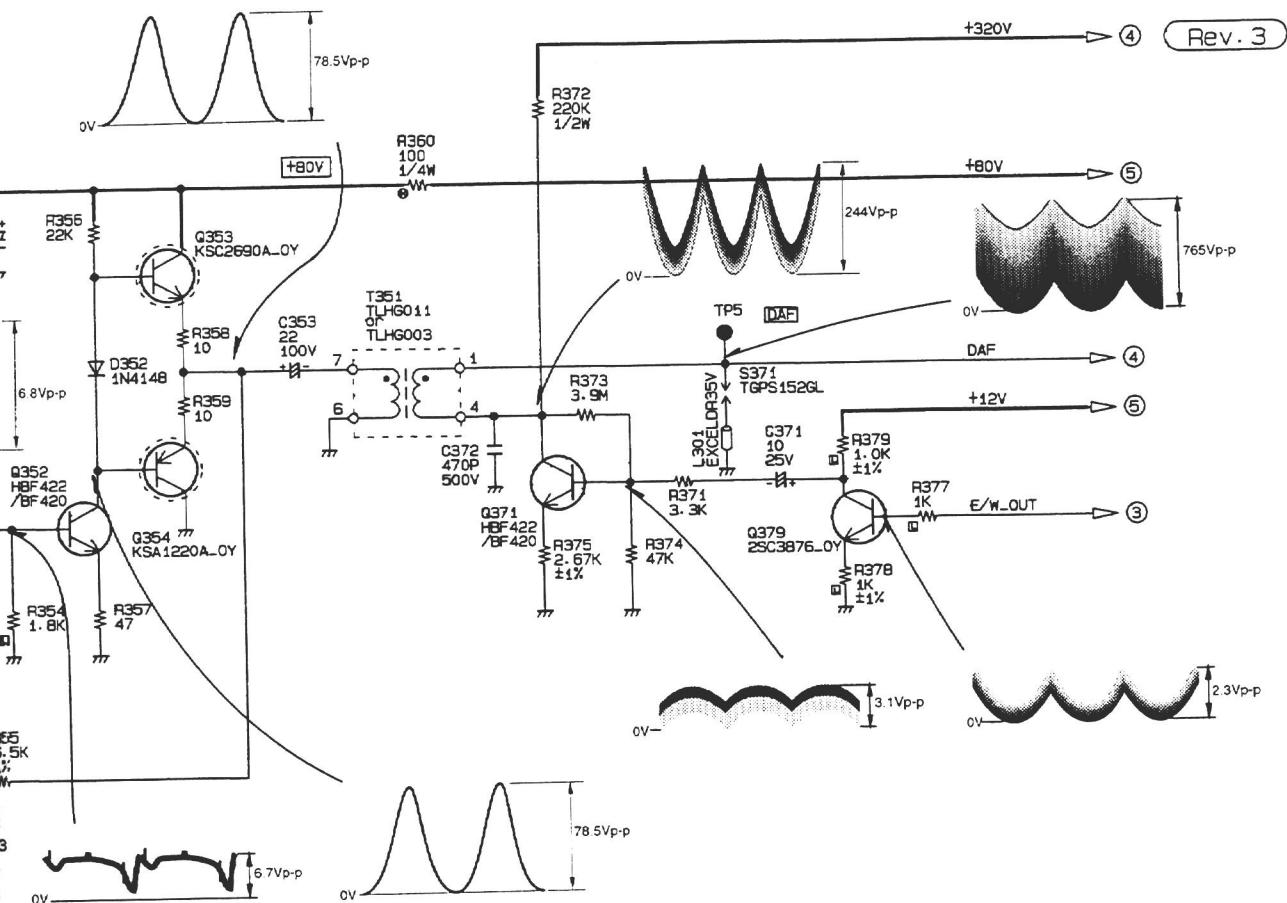
*INPUT SIGNAL 1024×768 75Hz





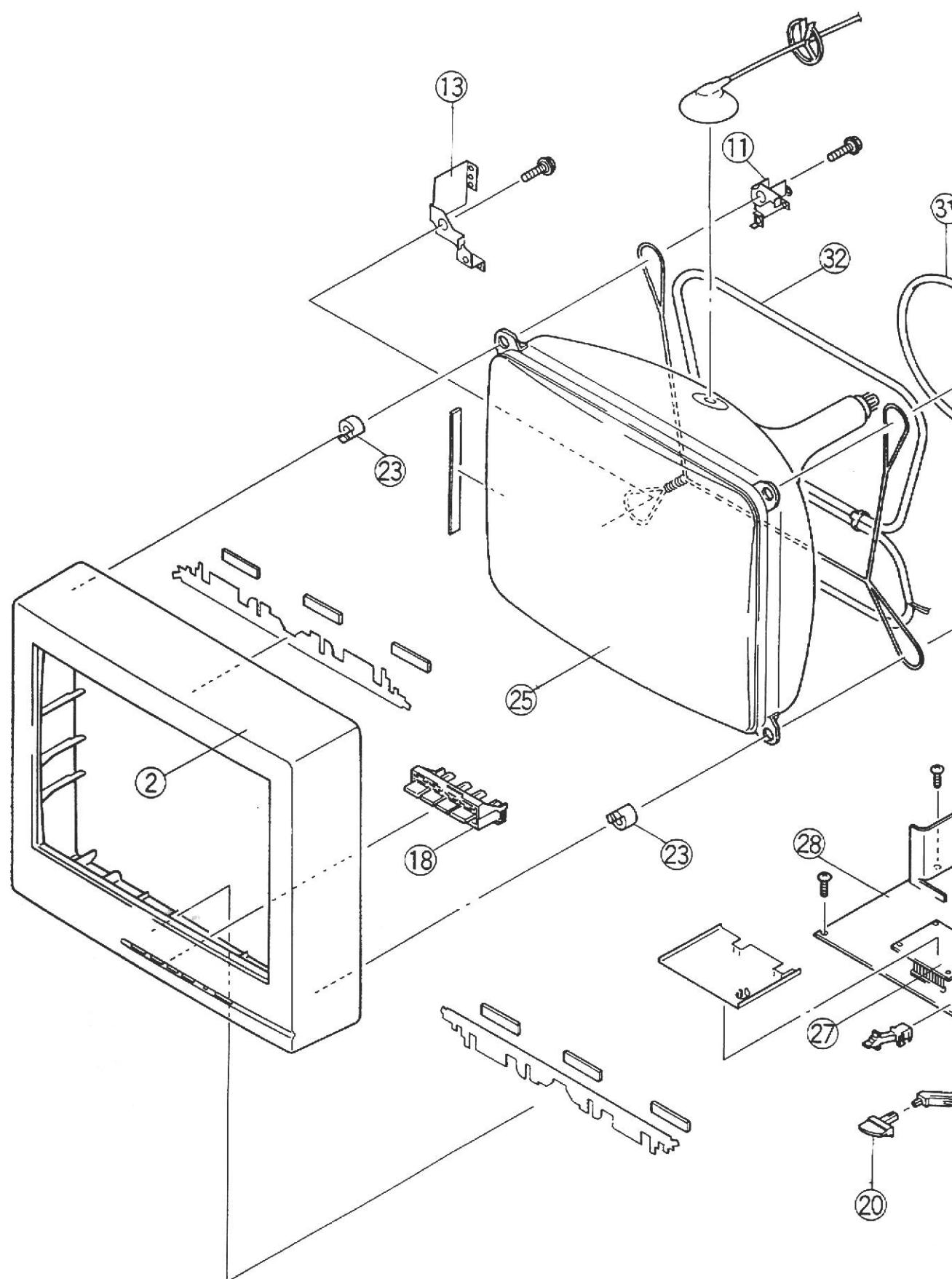
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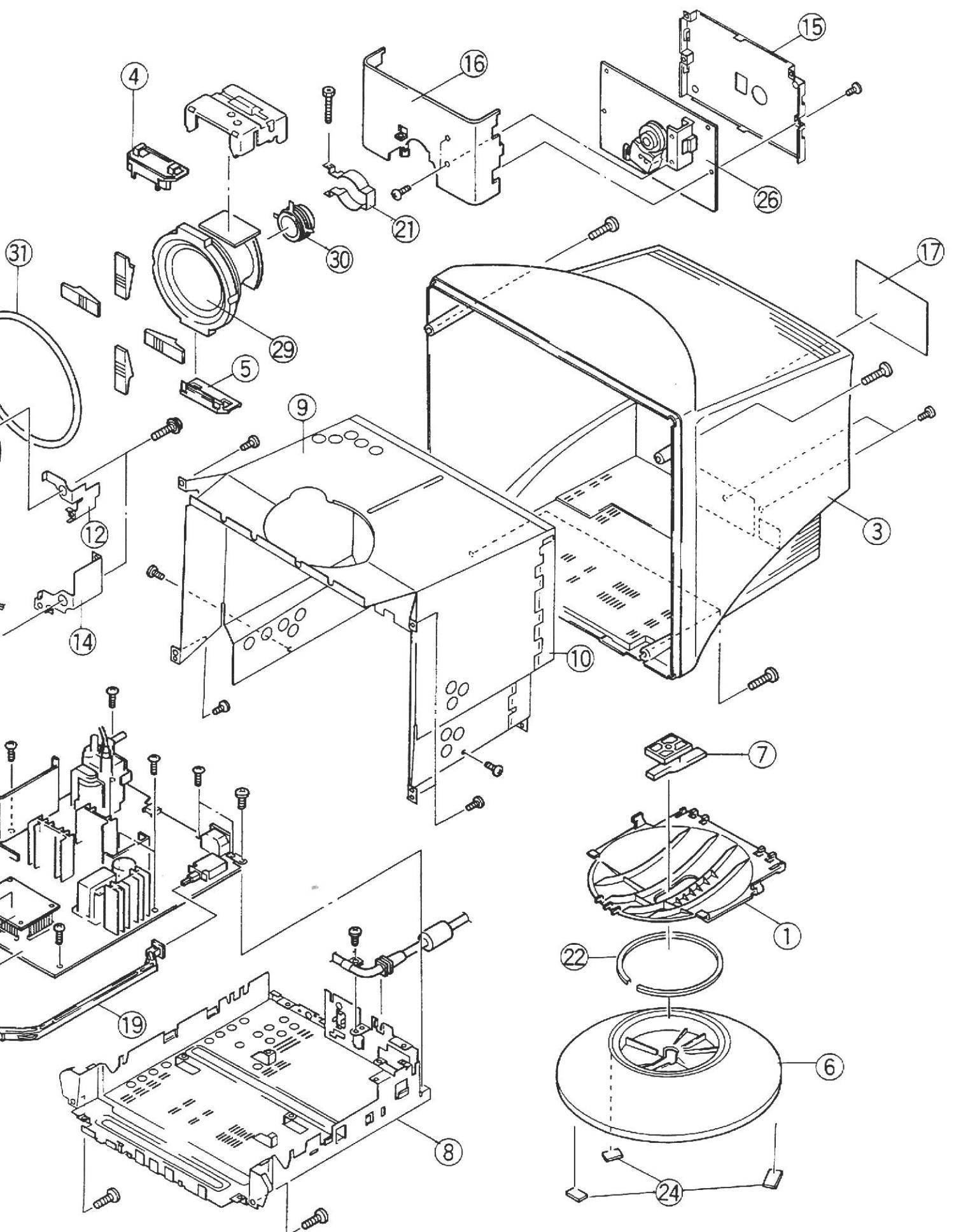


TNPH0039





EXPLODED VIEW



REPLACEMENT PARTS LIST

Important: Safety Notice

Components identified by the International symbol  have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

RESISTOR

PART NAME & DESCRIPTION		
TYPE		ALLOWANCE
C	Carbon	F $\pm 1\%$
F	Fuse	J $\pm 5\%$
M	Metal Oxide	K $\pm 10\%$
S	Solid	M $\pm 20\%$
W	Wire Wound	G $\pm 2\%$

CAPACITOR

PART NAME & DESCRIPTION		
TYPE		ALLOWANCE
C	Ceramic	C $\pm 0.25\text{pF}$
E	Electrolytic	D $\pm 0.5\text{pF}$
P	Polyester	F $\pm 1\text{pF}$
S	Styrol	J $\pm 5\%$
T	Tantalum	K $\pm 10\%$
PP	Polypropylene	L $\pm 15\%$
		M $\pm 20\%$
		P $-100\% - 0\%$
		Z $+80\% - 20\%$

Part No. Description
Example: ERD25TJ104 C 100K J 1/4W

Part No. Description
Example: ECKF1H103ZF C 0.01μF Z 50V

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
	CABINET & MAIN PARTS		24	TMK84990	SET LEG
▲	1 TKYAO1201A	BOTTOM CABINET		TMK85572	FERRITE STICK
▲	2 TKEAO1031	ESCUOTCHEON<-NM>		THEC0019	SCREW(FOR CRT PCB HOLDER)
▲	2 TTEAO1031-1	ESCUOTCHEON<-M,-E>		THT1027	SCREW(FOR CRT)
▲	TKUCO2102	REAR COVER		THT1069	SCREW(FOR SHIELD CASE)
▲	3 TKKC5019	LED GUIDE		XTN5-16A	SCREW
▲	TKKL5008	BLIND COVER		XTN5-25A	SCREW
▲	6 TKK859979-4	PEDESTAL		XTV3-BJ	SCREW
▲	7 TKK859980	CENTER POST		XYA4-EFB	SCREW
▲	8 TUAA02801-4	BOTTOM PLATE		XYE3-EJ10	SCREW
▲	9 TUCC5071-2	SHIELD CASE		26 TNPAQ182-22	PC BOARD W/COMPONENT(CRT)
▲	10 TUCC5072	SHIELD CASE(REA)		27 TNPAQ287-23	PC BOARD W/COMPONENT (MICRO COMPUTER)
▲	11 TUCC5167	EARTH METAL(R-UPPER)		28 TNPH0039-27	PC BOARD W/COMPONENT (MAIN)
▲	12 TUCC5168	EARTH METAL(L-UPPER)		32 TSPA022	DEGAUSS COIL
▲	13 TUCX5001	EARTH METAL(R-UNDER)		TSXA014	POWER CORD<-E>
▲	14 TUCX5002	EARTH METAL(L-UNDER)		TSXA051	POWER CORD<-M,-NM>
▲	15 TUSA007	SHIELD CASE(CRT PCB)		TSXF056	SIGNAL CORD
▲	16 TUSD003-1	SHIELD PLATE(CRT PCB)		TXAGA2D1734M	CRT EARTH LEAD
▲	17 TBMC720	MODEL NAME PLATE<-M,-E>		TSC8909-0	FERRITE CORE
▲	17 TBMC721	MODEL NAME PLATE<-NM>		XBA215T4.OAH	FUSE(4.0A)
▲	19 TBXAO2104	POWER SWITCH SHAFT		T4F31519Q	POLYESTER TAPE(50M)
▲	TBXAO4501	KNOB(CONTROL)		TPCA39801A	OUTER CARTON<-M,-E>
▲	20 TBXAO4601	KNOB(POWER SWITCH)		TPCA39901	OUTER CARTON<-NM>
▲	21 TESAO15	CRT PCB HOLDER		TXAPD2D1734T	FILLER(TOP)
▲	TESHO11	SPRING(HEAT SINK)		TXAPD2M1734B	FILLER(BOTTOM)
▲	TES9148-4	SPRING(CRT EARTH)		TPE814109-2	SET COVER
▲	22 TMM15404-1	SPACER RING		TQE8513-2	FUN BAG COVER
▲	TMM16452	LEAD CLAMPER(LONG)		TQBE0119	INSTRUCTION BOOK<-M,-E>
▲	TMM17434-1	LEAD CLAMPER(SHORT)		TQBE0118	INSTRUCTION BOOK<-NM>
▲	TMM6463	CLAMPER(MIDDLE)		TQDE14012	REGISTRATION CARD<-M>
▲	TMM7468	CLAMPER		TQFA322	PTB LABEL(INNER)
▲	23 TMMB5576-1	CRT RUBBER		TQFA343	BAR CODE LABEL
▲	TMKED031	BARRIER		TQF80720	NHW LABEL
▲	TMKG032	CRT RUBBER		TQF82880	HIGH VOLTAGE LABEL
▲	TMKG074	CUSHION		TQF83825-6	SERIAL NO. LABEL

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
	TQF85363-1	CARTON LABEL<-M>	Q595	UN5211AI	TRANSISTOR
	TQF85363-8	CARTON LABEL<-E>	Q596	UN5211AI	TRANSISTOR
	TQF86608	EARTH CAUTION LABEL	Q597	2SB792R	TRANSISTOR
	I.C		Q598	2SD1273APLB	TRANSISTOR
			Q671	UN5211AI	TRANSISTOR
IC101	TV5A004B	IC	Q672	UN5211AI	TRANSISTOR
IC102	24LC08BT1SN	IC	Q673	KTC3265-OY	TRANSISTOR
IC103	MB88346BPFTF	IC	Q674	KTA1298-OY	TRANSISTOR
IC104	MB88346BPFTF	IC	Q675	2SK1917FS1	TRANSISTOR
IC121	24LC21TISN	IC	Q771	2SD602R	TRANSISTOR
IC270	LM2931CMX	IC	Q821	2SK2148	TRANSISTOR
IC271	MM74HC00MX	IC	Q822	2SC4620V25	TRANSISTOR
IC280	M52346SP	IC	Q823	UN5211AI	TRANSISTOR
IC301	LF347MX	IC	Q824	2SA733Q	TRANSISTOR
IC401	STV9379	IC	Q840	2SA1505-OY	TRANSISTOR
IC501	TDA9103	IC	Q841	2SC3875-GR	TRANSISTOR
IC521	LM358MX	IC	Q842	2SA1505-OY	TRANSISTOR
IC720	UPC1406HA	IC	Q843	KTC200-OY	TRANSISTOR
IC721	LM324MX	IC	Q850	2SC3875-GR	TRANSISTOR
IC821	UC3842N	IC	Q863	2SB1548Q	TRANSISTOR
IC862	L78LR05C-MA	IC	Q864	2SC3202-OY	TRANSISTOR
IC870	LM324MX	IC	Q865	2SB1548Q	TRANSISTOR
IC951	LM324MX	IC	Q866	2SC3202-OY	TRANSISTOR
IC1301	LM1281N	IC	Q868	UN5211AI	TRANSISTOR
IC1302	LM2419T	HYBRID IC	Q869	UN5211AI	TRANSISTOR
IC1304	KIA78505P	IC	Q870	2SB1548Q	TRANSISTOR
IC1331	LM358MX	IC	Q871	2SC3202-OY	TRANSISTOR
IC1381	LM358MX	IC	Q873	UN5211AI	TRANSISTOR
IC1401	STV9422	IC	Q874	KTC200-OY	TRANSISTOR
	TRANSISTORS		Q876	UN5211AI	TRANSISTOR
Q101	UN5111AI	TRANSISTOR	Q885	2SB1434R	TRANSISTOR
Q111	UN5111AI	TRANSISTOR	Q886	2SC3876-OY	TRANSISTOR
Q112	UN5211AI	TRANSISTOR	Q888	UN5211AI	TRANSISTOR
Q207	2SC945Q	TRANSISTOR	Q889	2SC1473AR	TRANSISTOR
Q220	2SA1739R	TRANSISTOR	Q890	UN5211AI	TRANSISTOR
Q221	2SC3811R	TRANSISTOR	Q891	UN5211AI	TRANSISTOR
Q275	UN5211AI	TRANSISTOR	Q901	KTC200-QY	TRANSISTOR
Q279	UN5211AI	TRANSISTOR	Q951	2SD1994AR	TRANSISTOR
Q286	UN5111AI	TRANSISTOR	Q952	2SB1322AR	TRANSISTOR
Q287	UN5211AI	TRANSISTOR	Q953	2SD1994AR	TRANSISTOR
Q301	2SC945Q	TRANSISTOR	Q954	2SB1322AR	TRANSISTOR
Q302	2SA733Q	TRANSISTOR	Q1051	2SA1767Q	TRANSISTOR
Q303	2SC945Q	TRANSISTOR	Q1052	2SC1473AR	TRANSISTOR
Q321	2SC945Q	TRANSISTOR	Q1151	2SA1767Q	TRANSISTOR
Q351	2SA733Q	TRANSISTOR	Q1152	2SC1473AR	TRANSISTOR
Q352	2SC1473AR	TRANSISTOR	Q1251	2SA1767Q	TRANSISTOR
Q353	2SC3902S	TRANSISTOR	Q1252	2SC1473AR	TRANSISTOR
Q354	2SA1507S	TRANSISTOR	Q1340	2SC3811R	TRANSISTOR
Q371	2SC1473AR	TRANSISTOR	Q1341	UN5211AI	TRANSISTOR
Q379	2SC3876-OY	TRANSISTOR	Q1362	2SA1767Q	TRANSISTOR
Q521	2SD2058-GR	TRANSISTOR	Q1380	2SA733Q	TRANSISTOR
Q522	2SK2015Z	TRANSISTOR	Q1381	UN5211AI	TRANSISTOR
Q551	2SC5243002FD	TRANSISTOR	Q1401	UN5211AI	TRANSISTOR
Q561	UN5211AI	TRANSISTOR		DIODES	
Q562	2SK2350	TRANSISTOR	D108	RB706F40	DIODE
Q564	UN5211AI	TRANSISTOR	D111	SML1816W	DIODE(LED)
Q565	2SK2350	TRANSISTOR	D151	MTZJ5R6B	DIODE
Q581	2SD2058-GR	TRANSISTOR	D152	MTZJ5R6B	DIODE
Q582	2SB1548Q	TRANSISTOR	D156	MTZJ5R6B	DIODE
Q591	2SD1149R	TRANSISTOR	D157	MA728	DIODE
Q594	UN5211AI	TRANSISTOR	D169	MA142WK	DIODE

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
D185	1SS353	DIODE	D863	TV5RG2	DIODE
D186	1SS353	DIODE	DB64	RL42	DIODE
D187	1SS353	DIODE	D865	RL22	DIODE
D188	1SS353	DIODE	D870	RN3Z014-305	DIODE
D201	MA4056NM	DIODE	D875	MA4082NL	DIODE
D202	MA4056NM	DIODE	D901	IN4002S	DIODE
D203	MA4056NM	DIODE	D946	1ODF6	DIODE
D204	MA4056NM	DIODE	D1001	MA151K	DIODE
D205	MA152K	DIODE	D1002	MA151K	DIODE
D206	MA152K	DIODE	D1051	MA167A	DIODE
D210	MA700	DIODE	D1101	MA151K	DIODE
D220	1N4148	DIODE	D1102	MA151K	DIODE
D221	1N4148	DIODE	D1151	MA167A	DIODE
D271	1SS353	DIODE	D1201	MA151K	DIODE
D272	1SS353	DIODE	D1202	MA151K	DIODE
D273	1SS353	DIODE	D1251	MA167A	DIODE
D281	1SS353	DIODE	D1331	1N4148	DIODE
D321	1N4148	DIODE	D1332	1N4148	DIODE
D352	1N4148	DIODE	D1341	MA151K	DIODE
D401	1N4001S	DIODE	D1342	MA151K	DIODE
D403	1SS353	DIODE	D1343	MA151K	DIODE
D410	1N4148	DIODE	D1362	1N4148	DIODE
D411	MA4051NM	DIODE	D1365	MA4051NM	DIODE
D421	1N4148	DIODE	D1366	MA4051NM	DIODE
D501	MA700	DIODE	D1367	MA4051NM	DIODE
D521	MA4150NM	DIODE	D1380	MA40B2NL	DIODE
D522	1N4148	DIODE	D1381	EU02Z	DIODE
D523	MASOWA	DIODE	D1382	ERA18-04	DIODE
D530	MA4051NM	DIODE	D1385	ERA1502	DIODE
D551	FMP-3FU	DIODE	D1401	MTZJ5R6B	DIODE
D552	RP3FO14-302	DIODE	D1403	MTZJ5R6B	DIODE
D553	TV5RG2A	DIODE	D1404	MTZJ5R6B	DIODE
D554	11DQ04	DIODE	J141	ERA81004	DIODE
D555	EL1Z	DIODE	L601	MTZJ15C	DIODE
D561	1ODF6	DIODE			COIL & TRANSFORMERS
D564	1ODF6	DIODE	D657	TSK8029	FERRITE CORE
D571	1SS353	DIODE	J112	EXCELSA35T	LC COMBINATION
D572	1SS353	DIODE	L180	ELEY561KA	PEAKING COIL
D573	1SS353	DIODE	L230	EXCELSR35S	LC COMBINATION
D581	ERC30-02	DIODE	L301	EXCELDLR35C	LC COMBINATION
D582	ERC30-02	DIODE	L555	TLH85820Z1	COIL
D591	MA27WB	DIODE	L556	EXCELSA35T	LC COMBINATION
D614	ERA1506	DIODE	△ L558	TLH8001	COIL
D615	DTZTT112R7A	DIODE	L582	TLH85815T	COIL
D651	1N4148	DIODE	L591	TLUACNB220K	PEAKING COIL
D654	ERA34-10	DIODE	L602	EXCELSA35T	LC COMBINATION
D655	1ODF6	DIODE	△ L801	TLP4C65530D	LINE FILTER
D656	1N4148	DIODE	△ L802	TLP4C65530D	LINE FILTER
D671	31DF2	DIODE	L821	TSK8029	FERRITE CORE
D681	MA700	DIODE	L822	TSKB031	FERRITE CORE
DB21	FBU4KF	DIODE	L823	TSK8029	FERRITE CORE
DB22	ERA34-10	DIODE	L824	EXCELSA35T	LC COMBINATION
DB23	ERA3202	DIODE	L825	EXCELSA35T	LC COMBINATION
DB24	MA4100NL	DIODE	L861	EXCELDLR35C	LC COMBINATION
DB27	1N4148	DIODE	L862	EXCELDLR35C	LC COMBINATION
D828	1N4148	DIODE	L863	EXCELDLR35C	LC COMBINATION
D829	1SS353	DIODE	L864	EXCELDLR35C	LC COMBINATION
D830	ERA34-10	DIODE	L865	EXCELDLR35C	LC COMBINATION
D840	MA4200NH	DIODE	L870	EXCELDLR35C	LC COMBINATION
D850	MA4082NH	DIODE	L1051	TLTR47K186T	PEAKING COIL
D861	ERC3806	DIODE			
D862	FML-G14S	DIODE			

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description			
L1151	TLTR33K186T	PEAKING COIL			C289	ECUX1H103KBG	C	0.01UF	K	50V
L1251	TLTR22K186T	PEAKING COIL			C290	ECUX1H471KBN	C	470PF	K	50V
L1302	TSK8029	FERRITE CORE			C291	ECUX1H470JCG	C	47PF	J	50V
L1303	TSK8029	FERRITE CORE			C292	ECUX1H470JCG	C	47PF	J	50V
L1304	TSK8029	FERRITE CORE			C298	ECUX1H103KBG	C	0.01UF	K	50V
L1305	EXCELDLR35C	LC COMBINATION			C301	ECCF1H151J	C	150PF	J	50V
L1306	EXCELDLR35C	LC COMBINATION			C302	ECKF1H332KB	C	3300PF	K	50V
L1307	TSK8029	FERRITE CORE			C303	ECQV1H104JL	P	0.1UF	J	50V
L1308	EXCELDLR35C	LC COMBINATION			C304	ECUX1H102JCX	C	1000PF	J	50V
L1351	TSK8029	FERRITE CORE			C305	ECEA1EGE100	E	10UF		25V
L1352	TSK8031	FERRITE CORE			C306	ECUX1H101JCG	C	100PF	J	50V
L1361	TSK8029	FERRITE CORE			C311	ECEA1CGE101	E	100UF		16V
L1362	TSK8031	FERRITE CORE			C312	ECUX1H103KBG	C	0.01UF	K	50V
L1371	TSK8029	FERRITE CORE			C321	ECUX1H103KBG	C	0.01UF	K	50V
A-351	TLHG011	D.A.F. TRANSFORMER			C322	ECEA1EGE100	E	10UF		25V
A-T521	TLH4C65407D	COIL			C323	ECQV1H104JL	P	0.1UF	J	50V
A-T601	ETF39L91AZ	FLYBACK TRANSFORMER			C351	ECEA1CGE470	E	47UF		16V
A-T671	TLHX007	TRANSFORMER			C352	ECEA2AGE100	E	10UF		100V
A-T821	TLPA020	POWER TRANSFORMER			C353	ECQV1474JZ	P	0.47UF	J	100V
A-T822	TLPX006	TRANSFORMER			C354	ECUX1H331KBN	C	330PF	K	50V
	CONTROL				C371	ECEA1EGE100	E	10UF		25V
VR581	EVND1AA00B13	CONTROL B	1K OHM		C372	ECKD2H471KB5	C	470PF	K	500V
VR881	EVND1AA00B13	CONTROL B	1K OHM		C401	ECEA1EGN101	E	100UF		25V
	CAPACITORS				C402	ECEA1VGE101	E	100UF		35V
C2	ECQB1H472JF	P	4700PF	J	C403	ECKF1H222KB	C	2200PF	K	50V
C101	ECEA1AGE101	E	100UF		C404	ECEA1EGE471	E	470UF		25V
C103	ECUX1H103KBG	C	0.01UF	K	C405	ECKF1H561KB	C	560PF	K	50V
C104	ECUX1H103KBG	C	0.01UF	K	C406	ECQV1H104JL	P	0.1UF	J	50V
C105	ECUX1H220JCN	C	22PF	J	C407	ECQV1H224JL	P	0.22UF	J	50V
					C408	ECUX1H333KBX	C	0.033UF	K	50V
C106	ECUX1H220JCN	C	22PF	J	C409	ECUX1H150JCN	C	15PF	J	50V
C107	ECUX1H103KBG	C	0.01UF	K	C421	ECUX1H330JCG	C	33PF	J	50V
C108	ECEA1HGE010	E	1UF		C422	ECQV1H105JL	P	1UF	J	50V
C109	ECUX1C105ZFX	C	1UF	Z	C423	ECQV1H154JL	P	0.15UF	J	50V
C110	ECUX1H221KBN	C	220PF	K	C424	ECUX1H6B1JCX	C	680PF	J	50V
					C426	ECEA1CGE101	E	100UF		16V
C111	ECUX1H220JCN	C	22PF	J	C427	ECUX1H103KBG	C	0.01UF	K	50V
C112	ECUX1H221KBN	C	220PF	K	C430	ECEA1HGE010	E	1UF		50V
C113	ECUX1C105ZFX	C	1UF	Z	C431	ECEA1EGE100	E	10UF		25V
C121	ECUX1H103KBG	C	0.01UF	K	C432	ECUX1H104ZFX	C	0.1UF	Z	50V
C175	ECUX1H103KBG	C	0.01UF	K	C433	ECUX1H103KBG	C	0.01UF	K	50V
					C501	ECQB1H103JF	P	0.01UF	J	50V
C177	ECUX1H103KBG	C	0.01UF	K	C502	ECQV1H104JL	P	0.1UF	J	50V
C180	ECEA1AGE471	E	470UF		C504	ECUX1H820JCG	C	82PF	J	50V
C185	ECUX1H102KBN	C	1000PF	K	C505	ECEA1CGE101	E	100UF		16V
C186	ECUX1H102KBN	C	1000PF	K						
C201	ECEA1HGE2R2	E	2.2UF		C506	ECQP1H6B1GZ	PP	680PF	G	50V
					C507	ECUX1H472KBG	C	4700PF	K	50V
C203	ECUX1H102KBN	C	1000PF	K	C508	ECEA1CGE470	E	47UF		16V
C206	ECQE2104KF	P	0.1UF	K	C509	ECQV1H224JL	P	0.22UF	J	50V
C230	ECUX1H103KBG	C	0.01UF	K	C512	ECUX1H104ZFX	C	0.1UF	Z	50V
C231	EEUFC1A221	E	220UF							
C234	ECUX1H470JCG	C	47PF	J	C513	ECEA1CGE102	E	1000UF		16V
					C514	ECQV1H105JL	P	1UF	J	50V
C270	EEAFC1C560	E	56UF		C521	ECUX1H103KBG	C	0.01UF	K	50V
C279	ECUX1H221KBN	C	220PF	K	C522	ECUX1H102JCX	C	1000PF	J	50V
C280	ECQV1H474JL	P	0.47UF	J	C523	ECEA1EGE221	E	220UF		25V
C281	ECUX1H472KBG	C	4700PF	K						
C282	ECEA1HGE010	E	1UF		C524	ECKD2H332KB5	C	3300PF	K	500V
					C525	ECEA1VGE470	E	47UF		35V
C283	ECEA1HGE2R2	E	2.2UF		C539	ECUX1H103KBG	C	0.01UF	K	50V
C284	ECEA1HGE010	E	1UF		C545	ECEA1EGE100	E	10UF		25V
C285	ECEA1HGER47	E	0.47UF		C551	ECWH15H472HN	PP	4700PF	H	1.5KV
C286	ECUX1H333KBX	C	0.033UF	K						
C287	ECUX1H102KBN	C	1000PF	K	C552	ECKD3F821JBP	C	820PF	J	3KV
					C553	ECQF6272JZ	PP	2700PF	J	600V
C288	ECUX1H102KBN	C	1000PF	K						

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C554	ECQF6182JZ	PP	1800PF	J	600V	C834	ECKD3A681KBP	C	680PF	K	1KV
C558	ECKD3A102KBP	C	1000PF	K	1KV	C844	ECEA1CGE470	E	47UF		16V
C559	ECWF2274JB	PP	0.27UF	J	200V	C846	ECCF1H221J	C	220PF	J	50V
C560	ECWF2274JB	PP	0.27UF	J	200V	C851	ECQB1H473JF	P	0.047UF	J	50V
C561	ECUX1H103KBG	C	0.01UF	K	50V	C852	ECUX1H273KBX	C	0.027UF	K	50V
C562	ECUX1H473ZFX	C	0.047UF	Z	50V	C860	ECUX1C474ZFX	C	0.47UF	Z	16V
C563	ECWF2244JB	PP	0.24UF	J	200V	C861	ECEA2AGE221	E	220UF		100V
C564	ECUX1H103KBG	C	0.01UF	K	50V	C862	EEUFC1J821	E	820UF		63V
C565	ECUX1H473ZFX	C	0.047UF	Z	50V	C863	ECEA1VGE471	E	470UF		35V
C566	ECWF2105JB	PP	1UF	J	200V	C864	ECEA1EGE222	E	2200UF		25V
C571	ECLX1H102JCX	C	1000PF	J	50V	C865	ECEA1CGE332	E	3300UF		16V
C576	ECUX1H104ZFX	C	0.1UF	Z	50V	C867	ECQV1H104JL	P	0.1UF	J	50V
C581	ECEA1CGE471	E	470UF		16V	C868	ECEA1EGE100	E	10UF		25V
C582	ECEA1CGE471	E	470UF		16V	C870	ECEA1EGE102	E	1000UF		25V
C583	ECUX1H102KBN	C	1000PF	K	50V	C871	ECEA1CGE101	E	100UF		16V
C584	ECQV1H684JL	P	0.68UF	J	50V	C872	ECEA1VGE331	E	330UF		35V
C587	ECQE2224KF	P	0.22UF	K	200V	C874	ECEA1CGE221	E	220UF		16V
C588	ECQE2274KF	P	0.27UF	K	200V	C875	ECEA1EGE100	E	10UF		25V
C589	ECKF1H222K8	C	2200PF	K	50V	C876	ECEA1EGE100	E	10UF		25V
C591	ECUX1H222KBN	C	2200PF	K	50V	C878	ECQB1H103JF	P	0.01UF	J	50V
C592	ECKD2H332KB5	C	3300PF	K	50V	C879	ECQB1H682JF	P	6800PF	J	50V
C593	ECQE1335KF	P	3.3UF	K	100V	C901	TACQ102P500	C	1000PF		500V
C651	ECEA2CGE2R2	E	2.2UF		160V	C902	ECEA1HGE4R7	E	4.7UF		50V
C654	ECKD2H103KB5	C	0.01UF	K	500V	C946	ECEA2CGE330	E	33UF		160V
C655	ECEA2EGE100	E	10UF		250V	C951	ECQV1H334JL	P	0.33UF	J	50V
C656	ECEA2AGE220	E	22UF		100V	C952	ECEA1HGE4R7	E	4.7UF		50V
C671	ECKD2H221KB5	C	220PF	K	500V	C953	ECQV1H334JL	P	0.33UF	J	50V
C672	TAC1102Z221A	E	220UF		200V	C954	ECEA1HGE4R7	E	4.7UF		50V
C673	ECUX1H220JCN	C	22PF	J	50V	C955	ECUX1H103KBG	C	0.01UF	K	50V
C674	ECUX1H392JCW	C	3900PF	J	50V	C1001	ECEA1EGE100	E	10UF		25V
C680	ECUX1H222KBN	C	2200PF	K	50V	C1002	ECUX1H104ZFX	C	0.1UF	Z	50V
C683	ECUX1H102JCX	C	1000PF	J	50V	C1003	ECUX1E224ZFX	C	0.22UF	Z	25V
C685	ECUX1H103KBG	C	0.01UF	K	50V	C1004	ECUX1C105ZFX	C	1UF	Z	16V
C696	ECQB12223KF	P	0.022UF	K	200V	C1005	ECUX1H150JCN	C	15PF	J	50V
C697	TACCG102P200	C	1000PF		200V	C1051	ECQV1334JM	P	0.33UF	J	100V
C698	ECUX1H102JCX	C	1000PF	J	50V	C1052	ECKD2H102KB5	C	1000PF	K	500V
C699	ECUX1H104ZFX	C	0.1UF	Z	50V	C1053	ECQB1103KF	P	0.01UF	K	100V
C707	ECEA1EGE100	E	10UF		25V	C1054	ECUX1H104ZFX	C	0.1UF	Z	50V
C719	ECEA1EGE100	E	10UF		25V	C1055	ECQB1683KF	P	0.068UF	K	100V
C725	ECEA1EGE100	E	10UF		25V	C1056	ECUX1H103KBG	C	0.01UF	K	50V
C726	ECEA1EGE100	E	100UF		25V	C1101	ECEA1EGE100	E	10UF		25V
C727	ECUX1E563KBN	C	0.056UF	K	25V	C1102	ECUX1H104ZFX	C	0.1UF	Z	50V
C728	ECUX1H103KBG	C	0.01UF	K	50V	C1103	ECUX1E224ZFX	C	0.22UF	Z	25V
C770	ECUX1C225ZFW	C	2.2UF	Z	16V	C1104	ECUX1C105ZFX	C	1UF	Z	16V
△ C801	ECQU2A334MVZ	PP	0.33UF	M	250V	C1105	ECUX1H050CCN	C	5PF	C	50V
△ C802	ECQU2A334MVZ	PP	0.33UF	M	250V	C1151	ECQV1334JM	P	0.33UF	J	100V
△ C803	ECKDRS472ME	C	4700PF	M		C1152	ECKD2H102KB5	C	1000PF	K	500V
△ C804	ECKDRS472ME	C	4700PF	M		C1153	ECQB1103KF	P	0.01UF	K	100V
△ C805	ECKDRS472ME	C	4700PF	M		C1154	ECUX1H104ZFX	C	0.1UF	Z	50V
C821	TAC10942331A	E	330UF		400V	C1155	ECQB1683KF	P	0.068UF	K	100V
C822	ECQV1H104JL	P	0.1UF	J	50V	C1156	ECUX1H103KBG	C	0.01UF	K	50V
C823	ECKF1H222KB	C	2200PF	K	50V	C1201	ECEA1EGE100	E	10UF		25V
C824	ECQB1H152JF	P	1500PF	J	50V	C1202	ECUX1H104ZFX	C	0.1UF	Z	50V
C825	ECEA1EGE100	E	10UF		25V	C1203	ECUX1E224ZFX	C	0.22UF	Z	25V
C826	ECQE6473KF	P	0.047UF	K	600V	C1204	ECUX1C105ZFX	C	1UF	Z	16V
C827	ECKD3A681KBP	C	680PF	K	1KV	C1205	ECUX1H050CCN	C	5PF	C	50V
C828	ECQB1H103JF	P	0.01UF	J	50V	C1251	ECQV1334JM	P	0.33UF	J	100V
C829	ECQV1H104JL	P	0.1UF	J	50V	C1252	ECKD2H102KB5	C	1000PF	K	500V
C830	ECEA1EGE101	E	10UF		25V	C1253	ECQB1103KF	P	0.01UF	K	100V
△ C831	ECKDRS222ME	C	2200PF	M		C1254	ECUX1H104ZFX	C	0.1UF	Z	50V
△ C832	ECKDRS222ME	C	2200PF	M		C1255	ECQB1683KF	P	0.068UF	K	100V
C833	ECCF1H101J	C	100PF	J	50V	C1256	ECUX1H103KBG	C	0.01UF	K	50V

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description		
C1301	ECEA1CGE101	E	100UF		16V	J704	ERJ8GCYOROO	M	O OHM	1/BW
C1302	ECUX1H103KBG	C	0.01UF	K	50V	J705	ERJ8GCYOROO	M	O OHM	1/BW
C1303	ECUX1H104ZFX	C	0.1UF	Z	50V	J706	ERJ8GCYOROO	M	O OHM	1/BW
C1304	ECUX1E224ZFX	C	0.22UF	Z	25V	J707	ERJ8GCYOROO	M	O OHM	1/BW
C1305	ECUX1H103KBG	C	0.01UF	K	50V	J708	ERJ8GCYOROO	M	O OHM	1/BW
C1306	ECUX1H103K3G	C	0.01UF	K	50V	J709	ERJ8GCYOROO	M	O OHM	1/BW
C1307	ECEA1EGE100	E	10UF		25V	J710	ERJ8GCYOROO	M	O OHM	1/BW
C1309	ECUX1E224ZFX	C	0.22UF	Z	25V	J711	ERJ8GCYOROO	M	O OHM	1/BW
C1310	ECEA1CGE221	E	220UF		16V	J712	ERJ8GCYOROO	M	O OHM	1/BW
C1312	ECEA2AGE101	E	100UF		100V	J713	ERJ8GCYOROO	M	O OHM	1/BW
C1313	ECQV1104JM	P	0.1UF	J	100V	J714	ERJ8GCYOROO	M	O OHM	1/BW
C1314	ECQV1H104JL	P	0.1UF	J	50V	J715	ERJ8GCYOROO	M	O OHM	1/BW
C1315	TACCJ103P200	C	0.01UF		200V	J716	ERJ8GCYOROO	M	O OHM	1/BW
C1320	ECQV1H104JL	P	0.1UF	J	50V	J717	ERJ8GCYOROO	M	O OHM	1/BW
C1321	ECEA2CGE2R2	E	2.2UF		160V	J718	ERJ8GCYOROO	M	O OHM	1/BW
C1324	ECKD2H471KB5	C	470PF	K	500V	J719	ERJ8GCYOROO	M	O OHM	1/BW
C1327	TACCJ103P200	C	0.01UF		200V	J720	ERJ8GCYOROO	M	O OHM	1/BW
C1328	TACCJ103P200	C	0.01UF		200V	J721	ERJ8GCYOROO	M	O OHM	1/BW
C1329	TACCJ103P200	C	0.01UF		200V	J722	ERJ8GCYOROO	M	O OHM	1/BW
C1331	ECUX1E224ZFX	C	0.22UF	Z	25V	J723	ERJ8GCYOROO	M	O OHM	1/BW
C1332	ECUX1E224ZFX	C	0.22UF	Z	25V	J724	ERJ8GCYOROO	M	O OHM	1/BW
C1333	ECUX1H103KBG	C	0.01UF	K	50V	J725	ERJ8GCYOROO	M	O OHM	1/BW
C1334	TCUX2H101JCM	C	100PF	J	500V	J728	ERJ8GCYOROO	M	O OHM	1/BW
C1336	ECKD2H222KB5	C	2200PF	K	500V	J729	ERJ8GCYOROO	M	O OHM	1/BW
C1341	ECUX1H221JCG	C	220PF	J	50V	J730	ERJ8GCYOROO	M	O OHM	1/BW
C1361	ECKD2H472KB5	C	4700PF	K	500V	J731	ERJ8GCYOROO	M	O OHM	1/BW
C1362	ECCD2H100D	C	10PF	D	500V	J732	ERJ8GCYOROO	M	O OHM	1/BW
C1370	ECKD2H102KB5	C	1000PF	K	500V	J733	ERJ8GCYOROO	M	O OHM	1/BW
C1371	ECKD3D272KBP	C	2700PF	K	2KV	J734	ERJ8GCYOROO	M	O OHM	1/BW
C1380	ECEA1CGE470	E	47LF		16V	J735	ERJ8GCYOROO	M	O OHM	1/BW
C1381	ECUX1H103KBG	C	0.01UF	K	50V	J736	ERJ8GCYOROO	M	O OHM	1/BW
C1382	TACCG102P200	C	1000PF		200V	J737	ERJ8GCYOROO	M	O OHM	1/BW
C1401	ECEA1HGE010	E	1UF		50V	J738	ERJ8GCYOROO	M	O OHM	1/BW
C1402	ECUX1H104ZFX	C	0.1UF	Z	50V	J739	ERJ8GCYOROO	M	O OHM	1/BW
C1403	ECEA1EGE100	E	10UF		25V	J740	ERJ8GCYOROO	M	O OHM	1/BW
C1406	ECUX1H332KBN	C	3300PF	K	50V	J741	ERJ8GCYOROO	M	O OHM	1/BW
C1410	ECUX1H220JCN	C	22PF	J	50V	J742	ERJ8GCYOROO	M	O OHM	1/BW
RESISTORS										
C102	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	J743	ERJ8GCYOROO	M	O OHM	1/BW
J601	ERJ6GEYOROO	M	O OHM		1/10W	J744	ERJ8GCYOROO	M	O OHM	1/BW
J602	ERJ6GEYOROO	M	O OHM		1/10W	J745	ERJ8GCYOROO	M	O OHM	1/BW
J603	ERJ6GEYOROO	M	O OHM		1/10W	J746	ERJ8GCYOROO	M	O OHM	1/BW
J605	ERJ6GEYOROO	M	O OHM		1/10W	J747	ERJ8GCYOROO	M	O OHM	1/BW
J607	ERJ6GEYOROO	M	O OHM		1/10W	J748	ERJ8GCYOROO	M	O OHM	1/BW
J609	ERJ6GEYOROO	M	O OHM		1/10W	J749	ERJ8GCYOROO	M	O OHM	1/BW
J610	ERJ6GEYOROO	M	O OHM		1/10W	J750	ERJ8GCYOROO	M	O OHM	1/BW
J611	ERJ6GEYOROO	M	O OHM		1/10W	J751	ERJ8GCYOROO	M	O OHM	1/BW
J612	ERJ6GEYOROO	M	O OHM		1/10W	J752	ERJ8GCYOROO	M	O OHM	1/BW
J613	ERJ6GEYOROO	M	O OHM		1/10W	J753	ERJ8GCYOROO	M	O OHM	1/BW
J614	ERJ6GEYOROO	M	O OHM		1/10W	J754	ERJ8GCYOROO	M	O OHM	1/BW
J615	ERJ6GEYOROO	M	O OHM		1/10W	J755	ERJ8GCYOROO	M	O OHM	1/BW
J616	ERJ8GCYOROO	M	O OHM		1/8W	J756	ERJ8GCYOROO	M	O OHM	1/BW
J617	ERJ6GEYJ183	M	18K OHM	J	1/10W	J757	ERJ8GCYOROO	M	O OHM	1/BW
J618	ERJ6GEYOROO	M	O OHM		1/10W	J758	ERJ8GCYOROO	M	O OHM	1/BW
J619	ERJ6GEYOROO	M	O OHM		1/10W	J759	ERJ8GCYOROO	M	O OHM	1/BW
J620	ERJ6GEYOROO	M	O OHM		1/10W	J760	ERJ8GCYOROO	M	O OHM	1/BW
J621	ERJ6GEYOROO	M	O OHM		1/10W	J761	ERJ8GCYOROO	M	O OHM	1/BW
J622	ERJ6GEYOROO	M	O OHM		1/10W	J762	ERJ8GCYOROO	M	O OHM	1/BW
J701	ERJ8GCYOROO	M	O OHM		1/8W	J763	ERJ8GCYOROO	M	O OHM	1/BW
J702	ERJ8GCYOROO	M	O OHM		1/8W	J764	ERJ8GCYOROO	M	O OHM	1/BW
J703	ERJ8GCYOROO	M	O OHM		1/8W	J765	ERJ8GCYOROO	M	O OHM	1/BW
J770	ERJ8GCYOROO	M	O OHM		1/8W	J771	ERJ8GCYOROO	M	O OHM	1/BW
J772	ERJ8GCYOROO	M	O OHM		1/8W	J773	ERJ8GCYOROO	M	O OHM	1/BW

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
J775	ERJ8GCYOROO	M	0 OHM	1/BW	R206	ERJ6GEYJ103	M	10K OHM	J 1/10W
J776	ERJ8GCYOROO	M	0 OHM	1/BW	R220	ERDS2TJ561	C	560 OHM	J 1/4W
J777	ERJ8GCYOROO	M	0 OHM	1/BW	R221	ERJ6GEYJ103	M	10K OHM	J 1/10W
J778	ERJ8GCYOROO	M	0 OHM	1/BW	R222	ERJ6GEYJ224	M	220K OHM	J 1/10W
J779	ERJ8GCYOROO	M	0 OHM	1/BW	R224	ERJ6GEYJ472	M	4.7K OHM	J 1/10W
J780	ERJ8GCYOROO	M	0 OHM	1/BW	R226	ERJ6GEYJ821	M	820 OHM	J 1/10W
J781	ERJ8GCYOROO	M	0 OHM	1/BW	R227	ERDS2TJ102	C	1K OHM	J 1/4W
J782	ERJ8GCYOROO	M	0 OHM	1/BW	R228	ERJ6GEYJ471	M	470 OHM	J 1/10W
J783	ERJ8GCYOROO	M	0 OHM	1/BW	R261	ERJ6ENF2702	M	27K OHM	F 1/10W
J784	ERJ8GCYOROO	M	0 OHM	1/BW	R262	ERJ6ENF2103	M	210K OHM	F 1/10W
J785	ERJ8GCYOROO	M	0 OHM	1/BW	R271	ERJ6GEYJ102	M	1K OHM	J 1/10W
J1105	ERJ8GCYOROO	M	0 OHM	1/BW	R272	ERJ6GEYJ122	M	1.2K OHM	J 1/10W
L1001	ERJ8GCYOROO	M	0 OHM	1/BW	R273	ERJ6GEYJ103	M	10K OHM	J 1/10W
L1101	ERJ8GCYOROO	M	0 OHM	1/BW	R274	ERJ6GEYJ103	M	10K OHM	J 1/10W
L1201	ERJ8GCYOROO	M	0 OHM	1/BW	R275	ERJ6GEYJ102	M	1K OHM	J 1/10W
R101	ERJ6GEYJ152	M	1.5K OHM	J 1/10W	R276	ERJ6GEYJ102	M	1K OHM	J 1/10W
R102	ERJ6GEYJ472	M	4.7K OHM	J 1/10W	R278	ERJ6GEYJ562	M	5.6K OHM	J 1/10W
R106	ERDS2TJ331	C	330 OHM	J 1/4W	R279	ERJ6GEYJ103	M	10K OHM	J 1/10W
R108	ERJ6GEYJ104	M	100K OHM	J 1/10W	R280	ERJ6GEYJ151	M	150 OHM	J 1/10W
R109	ERJ6ENF1782	M	17.8K OHM	F 1/10W	R281	ERJ6GEYJ106	M	10M OHM	J 1/10W
R110	ERJ6ENF5621	M	5.62K OHM	F 1/10W	R282	ERJ6GEYJ152	M	1.5K OHM	J 1/10W
R111	ERJ6ENF1182	M	11.8K OHM	F 1/10W	R283	ERJ6GEYJ561	M	560 OHM	J 1/10W
R112	ERJ6ENF3242	M	32.4K OHM	F 1/10W	R284	ERJ6GEYJ562	M	5.6K OHM	J 1/10W
R113	ERJ6ENF1782	M	17.8K OHM	F 1/10W	R285	ERJ6GEYJ222	M	2.2K OHM	J 1/10W
R114	ERJ6ENF1782	M	17.8K OHM	F 1/10W	R286	ERJ6GEYJ562	M	5.6K OHM	J 1/10W
R115	ERDS2TJ331	C	330 OHM	J 1/4W	R287	ERJ6GEYJ382	M	3.9K OHM	J 1/10W
R116	ERJ6ENF3242	M	32.4K OHM	F 1/10W	R288	ERJ6GEYJ472	M	4.7K OHM	J 1/10W
R119	ERJ6GEYJ102	M	1K OHM	J 1/10W	R289	ERJ6GEYJ472	M	4.7K OHM	J 1/10W
R121	ERJ6GEYJ103	M	10K OHM	J 1/10W	R290	ERJ6GEYJ472	M	4.7K OHM	J 1/10W
R122	ERJ8GCYJ331	M	330 OHM	J 1/BW	R291	ERJ6GEYJ102	M	1K OHM	J 1/10W
R123	ERJ6GEYJ473	M	47K OHM	J 1/10W	R292	ERJ6GEYJ102	M	1K OHM	J 1/10W
R124	ERJ8GCYJ331	M	330 OHM	J 1/8W	R293	ERJ6GEYJ182	M	1.8K OHM	J 1/10W
R126	ERJ8GCYJ331	M	330 OHM	J 1/8W	R294	ERJ6GEYJ472	M	4.7K OHM	J 1/10W
R151	ERJ6GEYJ1C3	M	10K OHM	J 1/10W	R295	ERJ6GEYJ472	M	4.7K OHM	J 1/10W
R154	ERJ6GEYOROO	M	0 OHM	1/10W	R296	ERJ6GEYJ104	M	100K OHM	J 1/10W
R155	ERJ6GEYOROO	M	0 OHM	1/10W	R301	ERDS2TJ332	C	3.3K OHM	J 1/4W
R156	ERJ6GEYOROO	M	0 OHM	1/10W	R302	ERDS2TJ102	C	1K OHM	J 1/4W
R157	ERJ6GEYJ103	M	10K OHM	J 1/10W	R303	ERDS2TJ222	C	2.2K OHM	J 1/4W
R158	ERJ6GEYJ392	M	3.9K OHM	J 1/10W	R304	ERDS2TJ222	C	2.2K OHM	J 1/4W
R159	ERJ6GEYJ392	M	3.9K OHM	J 1/10W	R305	ERDS2TJ180	C	18 OHM	J 1/4W
R160	ERJ6GEYJ332	M	3.3K OHM	J 1/10W	R306	ERD32TJ102	C	1K OHM	J 1/4W
R161	ERJ6GEYJ333	M	33K OHM	J 1/10W	R307	ERJ6ENF5622	M	56.2K OHM	F 1/10W
R165	ERJ6GEYJ103	M	10K OHM	J 1/10W	R308	ERJ6ENF3322	M	33.2K OHM	F 1/10W
R166	ERJ6GEYJ512	M	5.1K OHM	J 1/10W	R309	ERJ6GEYJ473	M	47K OHM	J 1/10W
R170	ERJ6GEYJ101	M	100 OHM	J 1/10W	R310	ERJ6GEYJ104	M	100K OHM	J 1/10W
R171	ERJ6GEYJ101	M	100 OHM	J 1/10W	R311	ERJ6GEYJ122	M	1.2K OHM	J 1/10W
R172	ERJ6GEYJ223	M	22K OHM	J 1/10W	R312	ERJ6GEYJ103	M	10K OHM	J 1/10W
R173	ERJ6GEYJ223	M	22K OHM	J 1/10W	R313	ERJ6GEYJ101	M	100 OHM	J 1/10W
R174	ERJ6GEYJ103	M	10K OHM	J 1/10W	R321	ERJ6ENF4752	M	47.5K OHM	F 1/10W
R175	ERJ8GCYJ101	M	100 OHM	J 1/BW	R322	ERJ6ENF5902	M	59K OHM	F 1/10W
R176	ERJ6GEYJ103	M	10K OHM	J 1/10W	R324	ERJ6ENF4532	M	45.3K OHM	F 1/10W
R177	ERJ6GEYJ471	M	470 OHM	J 1/10W	R325	ERJ6GEYJ104	M	100K OHM	J 1/10W
R178	ERJ8GCYJ101	M	100 OHM	J 1/BW	R326	ERDS2TJ333	C	33K OHM	J 1/4W
R179	ERJ8GCYJ101	M	100 OHM	J 1/BW	R327	ERDS2TJ564	C	560K OHM	J 1/4W
R184	ERJ6GEYJ471	M	470 OHM	J 1/10W	R328	ERJ6GEYJ682	M	6.8K OHM	J 1/10W
R185	ERJ6GEYOROO	M	0 OHM	1/10W	R329	ERJ8GEYJ222	M	2.2K OHM	J 1/10W
R186	ERJ6GEYOROO	M	0 OHM	1/10W	R330	ERDS2TJ681	C	680 OHM	J 1/4W
R201	ERJ8GCYJ122	M	1.2K OHM	J 1/BW	R351	ERD25TJ102K	C	1K OHM	J 1/4W
R202	ERJ8GCYJ122	M	1.2K OHM	J 1/BW	R352	ERJ6ENF2871	M	2.67K OHM	F 1/10W
R203	ERJ6GEYJ392	M	3.9K OHM	J 1/10W	R354	ERJ6GEYJ182	M	1.8K OHM	J 1/10W
R204	ERJ6GEYJ392	M	3.9K OHM	J 1/10W	R355	ERJ6ENF6652	M	66.5K OHM	F 1/10W
R205	ERJ6GEYJ392	M	3.9K OHM	J 1/10W	R356	ERDS2TJ223	C	22K OHM	J 1/4W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R357	ERDS2TJ470	C	47 OHM	J	1/4W	R547	ERJ6ENF5111	M	5.11K OHM	F	1/10W
R358	ERDS2TJ100	C	10 OHM	J	1/4W	R548	ERJ6GEYJ102	M	1K OHM	J	1/10W
R359	ERDS2TJ100	C	10 OHM	J	1/4W	R554	ERX2SJ1R5	M	1.5 OHM	J	2W
R360	ERQ14AJ101	F	100 OHM	J	1/4W	R555	ERX2SJ1R2	M	1.2 OHM	J	2W
R371	ERD25FJ332K	C	3.3K OHM	J	1/4W	R557	ERX3FJX6R8D	M	6.8 OHM	J	3W
R372	ERDS1FJ224	C	220K OHM	J	1/2W	R558	ERDS1FJ221	C	220 OHM	J	1/2W
R373	ERDS2TJ395	C	3.9M OHM	J	1/4W	R561	ERDS1FJ472	C	4.7K OHM	J	1/2W
R374	ERDS2TJ473	C	47K OHM	J	1/4W	R562	ERJ8GCYJ472	M	4.7K OHM	J	1/8W
R375	EROS2CKF2671	M	2.67K OHM	F	1/4W	R563	ERJ6GEYJ100	M	10 OHM	J	1/10W
R377	ERJ6GEYJ102	M	1K OHM	J	1/10W	R564	ERDS1FJ472	C	4.7K OHM	J	1/2W
R378	ERJ6ENF1001	M	1K OHM	F	1/10W	R565	ERJSGCYJ472	M	4.7K OHM	J	1/8W
R379	ERJ6ENF1001	M	1K OHM	F	1/10W	R566	ERJBGEYJ100	M	10 OHM	J	1/10W
R401	ER025CKF1782	M	17.8K OHM	F	1/4W	R571	ERJ6GEYJ474	M	470K OHM	J	1/10W
R402	ERJ6GEYJ682	M	6.8K OHM	J	1/10W	R572	ERJ6GEYJ274	M	270K OHM	J	1/10W
R403	ERJ6GEYJ123	M	12K OHM	J	1/10W	R573	ERJ6GEYJ104	M	100K OHM	J	1/10W
R404	ER025CKF3162	M	31.6K OHM	F	1/4W	R576	ERJ6GEYJ153	M	15K OHM	J	1/10W
R405	ERDS2TJ1R0	C	1 OHM	J	1/4W	R577	ERJ6GEYJ222	M	8.2K OHM	J	1/10W
R406	ERX1SJ1R0	M	1 OHM	J	1W	R579	ERG3FJU182	M	1.8K OHM	J	3W
R407	ERG1SJ221	M	220 OHM	J	1W	R581	ERDS2TJ101	C	100 OHM	J	1/4W
R408	ERJ6GEYJ681	M	680 OHM	J	1/10W	R582	ERDS2TJ101	C	100 OHM	J	1/4W
R411	ERJ6GEYJ122	M	1.2K OHM	J	1/10W	R583	ERJBGCYJ332	M	3.3K OHM	J	1/8W
R412	ERJ6GEYJ103	M	10K OHM	J	1/10W	R584	TAR18BKOR11Z	F	0.11 OHM	K	1/4W
R421	ERJ6GEYJ183	M	18K OHM	J	1/10W	R585	ERG3FJ220	M	22 OHM	J	3W
R422	ERJ6GEYJ123	M	12K OHM	J	1/10W	R587	ERDS1FJ105	C	1K OHM	J	1/2W
R440	ERJ6GEYJ153	M	15K OHM	J	1/10W	R588	ERDS1FJ274	C	270K OHM	J	1/2W
R441	ERJ6GEYJ333	M	33K OHM	J	1/10W	R589	ERDS1FJ564	C	560K OHM	J	1/2W
R442	ERJ6GEYJ562	M	5.6K OHM	J	1/10W	R590	ERDS1FJ1B4	C	180K OHM	J	1/2W
R443	ERJ6GEYJ333	M	33K OHM	J	1/10W	R591	ERJ6ENF1002	M	10K OHM	F	1/10W
R444	ERJ6GEYJ223	M	22K OHM	J	1/10W	R592	ERG3FJ273	M	27K OHM	J	3W
R445	ERJ6GEYJ333	M	33K OHM	J	1/10W	R593	ERJ6ENF1621	M	1.82K OHM	F	1/10W
R446	ERJ6GEYJ332	M	3.3K OHM	J	1/10W	R594	ERDS2TJ682	C	6.8K OHM	J	1/4W
R447	ERJ6GEYJ333	M	33K OHM	J	1/10W	R595	EROS2CKF3161	M	3.16K OHM	F	1/4W
R448	ERJ6GEYJ562	M	5.6K OHM	J	1/10W	R596	ER052CKF5361	M	5.36K OHM	F	1/4W
R449	ERJ6GEYJ333	M	33K OHM	J	1/10W	R597	ERDS2TJ121	C	120 OHM	J	1/4W
R502	ERJ6GEYJ333	M	33K OHM	J	1/10W	R598	ERDS1FJ1R8	C	1.8 OHM	J	1/2W
R503	ERJSGCYJ682	M	6.8K OHM	J	1/8W	R651	ER025CKF8251	M	8.25K OHM	F	1/4W
R504	ERJ6GEYOR00	M	0 OHM	J	1/10W	R652	ERDS2TJ333	C	33K OHM	J	1/4W
R505	ERJ6GEYJ183	M	18K OHM	J	1/10W	R654	ERQ14AJ100	F	10 OHM	J	1/4W
R506	ERJ6GEYJ154	M	150K OHM	J	1/10W	R655	ERQ14AJ100	F	10 OHM	J	1/4W
R507	ERJ6ENF1242	M	12.4K OHM	F	1/10W	R656	ERJ6ENF3482	M	34.8K OHM	F	1/10W
R508	ERJ6ENF2322	M	23.2K OHM	F	1/10W	R657	ECUX1C105ZFX	C	1UF	Z	16V
R509	ERJ6ENF7501	M	7.5K OHM	F	1/10W	R658	ERJ6ENF1002	M	10K OHM	F	1/10W
R510	ERJ6GEYJ152	M	1.5K OHM	J	1/10W	R659	ERQ14AJ100	F	10 OHM	J	1/4W
R511	ERJ6GEYJ334	M	33K OHM	J	1/10W	R669	ERJBGGEYJ682	M	6.8K OHM	J	1/10W
R512	ERJ6GEYJ100	M	10 OHM	J	1/10W	R670	ERX3FJX1R0D	M	1 OHM	J	3W
R514	ERD25FJ392K	C	3.9K OHM	J	1/4W	R671	ERJ6GEYJ472	M	4.7K OHM	J	1/10W
R515	ERDS2TJ392	C	3.9K OHM	J	1/4W	R672	ERJ6GEYJ562	M	5.6K OHM	J	1/10W
R517	ERJ6GEYJ821	M	820 OHM	J	1/10W	R673	ERJ6GEYJ392	M	3.9K OHM	J	1/10W
R521	ERJ6GEYJ473	M	47K OHM	J	1/10W	R674	ERDS2TJ102	C	1K OHM	J	1/4W
R522	ERJ6GEYJ124	M	120K OHM	J	1/10W	R675	ERQ14AJ100	F	10 OHM	J	1/4W
R523	ERJ6GEYJ474	M	470K OHM	J	1/10W	R676	ERDS2TJ104	C	100K OHM	J	1/4W
R524	ERJ6GEYJ101	M	100 OHM	J	1/10W	R677	ERX3FJX1R0D	M	1 OHM	J	3W
R525	ERG2SJ121	M	120 OHM	J	2W	R678	ERG1SJ332	M	3.3K OHM	J	1W
R526	ERDS1FJ470	C	47 OHM	J	1/2W	R680	ERDS2TJ102	C	1K OHM	J	1/4W
R527	ERDS2TJ332	C	3.3K OHM	J	1/4W	R681	ERDS2TJ104	C	100K OHM	J	1/4W
R528	ERG1SJ561	M	560 OHM	J	1W	R682	ERDS2TJ823	C	62K OHM	J	1/4W
R530	ERJ6GEYJ562	M	5.6K OHM	J	1/10W	R683	ERDS2TJ562	C	5.6K OHM	J	1/4W
R539	ERJ6GEYJ102	M	1K OHM	J	1/10W	R684	ERJ6GEYJ124	M	120K OHM	J	1/10W
R543	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R693	ERJ6GEYJ154	M	150K OHM	J	1/10W
R544	ERJ6GEYJ103	M	10K OHM	J	1/10W	R694	ERJ6GEYJ333	M	33K OHM	J	1/10W
R545	ERJ6GEYJ822	M	8.2K OHM	J	1/10W	R695	ERJ6GEYK825	M	8.2M OHM	K	1/10W
R546	ERJ6GEYJ153	M	15K OHM	J	1/10W	R696	ERDS1FJ274	C	270K OHM	J	1/2W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R697	ERJ12NF3903	M	390K OHM	F	1/2W	R658	ERJ6ENF2002	M	20K OHM	F	1/10W
R698	ERJBENF2202	M	22K OHM	F	1/8W	R659	ERJ6ENF2321	M	2.32K OHM	F	1/10W
R699	EROS2CKF3403	M	340K OHM	F	1/4W	R861	ERQ12AJR12HK	F	0.12 OHM	J	1/2W
R701	ERJ6GEYJ333	M	33K OHM	J	1/10W	R863	ERQ12AJR33HK	F	0.33 OHM	J	1/2W
R702	ERJ6GEYJ333	M	33K OHM	J	1/10W	R864	ERQ12AJR12HK	F	0.12 OHM	J	1/2W
R707	ERJ6GEYJ103	M	10K OHM	J	1/10W	R865	ERQ12AJR12HK	F	0.12 OHM	J	1/2W
R715	ERJ6GEYJ101	M	100 OHM	J	1/10W	R867	ERDS2TJ102	C	1K OHM	J	1/4W
R716	ERDS2TJ101	C	100 OHM	J	1/4W	R868	ERD25FJ271K	C	270 OHM	J	1/4W
R717	ERJ6GEYJ153	M	15K OHM	J	1/10W	R869	ERD25FJ271K	C	270 OHM	J	1/4W
R718	ERJ6GEYJ103	M	10K OHM	J	1/10W	R870	ERQ12AJR33HK	F	0.33 OHM	J	1/2W
R719	ERJ6GEYJ103	M	10K OHM	J	1/10W	R871	ERDS2TJ102	C	1K OHM	J	1/4W
R720	ERJ6GEYJ683	M	68K OHM	J	1/10W	R872	ERD25FJ271K	C	270 OHM	J	1/4W
R721	ERJ6GEYJ683	M	68K OHM	J	1/10W	R873	ERJ6ENF1102	M	11K OHM	F	1/10W
R722	ERJ6GEYJ333	M	33K OHM	J	1/10W	R874	ERJ6ENF1102	M	11K OHM	F	1/10W
R723	ERJ6GEYJ104	M	100K OHM	J	1/10W	R875	ERDS1FJ151	C	150 OHM	J	1/2W
R724	ERJ6GEYJ104	M	100K OHM	J	1/10W	R876	ERJ6ENF3321	M	3.32K OHM	F	1/10W
R725	ERJ6GEYJ122	M	1.2K OHM	J	1/8W	R877	ERDS2TJ102	C	1K OHM	J	1/4W
R726	ERJ6GEYJ102	M	1K OHM	J	1/10W	R878	ERJ6ENF6191	M	6.19K OHM	F	1/10W
R727	TAR103J0102H	M	1K OHM	J	1/10W	R879	ERJ6ENF1621	M	1.62K OHM	F	1/10W
R728	ERJ6GEYJ103	M	10K OHM	J	1/10W	R880	ERJ6ENF1331	M	1.33K OHM	F	1/10W
R729	ERJ6GEYJ104	M	100K OHM	J	1/10W	R881	ERJ6ENF1181	M	1.18K OHM	F	1/10W
R751	ERJ6GEYJ333	M	33K OHM	J	1/10W	R882	ERG15UJ103	M	10K OHM	J	1W
R752	ERJ6GEYJ223	M	22K OHM	J	1/10W	R883	ERD25CKF2742	M	27.4K OHM	F	1/4W
R770	ERJ6GEYJ272	M	2.7K OHM	J	1/10W	R884	ERJ6ENF1781	M	1.78K OHM	F	1/10W
R771	ERJ6GEYJ332	M	3.3K OHM	J	1/10W	R885	ERJ6GEYJ103	M	10K OHM	J	1/10W
R772	ERJ6GEYJ274	M	270K OHM	J	1/10W	R886	ERDS1FJ122	C	1.2K OHM	J	1/2W
R801	ERC12AGK394	S	390K OHM	K	1/2W	R887	ERDS1FJ123	C	12K OHM	J	1/2W
R802	ERT06ZFL120P	THERMISTOR				R888	ERJ6GEYJ392	M	3.9K OHM	J	1/10W
R821	ERDS1FJ224	C	220K OHM	J	1/2W	R892	ERJ6GEYJ223	M	22K OHM	J	1/10W
R822	ERDS1FJ224	C	220K OHM	J	1/2W	R893	ERDS2TJ322	C	3.3K OHM	J	1/4W
R823	EROS2CKF8202	M	82K OHM	F	1/4W	R894	ERDS2TJ391	C	390 OHM	J	1/4W
R824	ERDS2TJ470	C	47 OHM	J	1/4W	R895	ERDS2TJ104	C	100K OHM	J	1/4W
R825	ERW2PKR22	M	0.22 OHM	K	2W	R896	ERJ6GEYJ103	M	10K OHM	J	1/10W
R826	ERG3FJ104	M	100K OHM	J	3W	R897	ERD25FJ332K	C	3.3K OHM	J	1/4W
R827	ERQ12AJ4R7	F	4.7 OHM	J	1/2W	R898	ERJ6ENF3321	M	3.32K OHM	F	1/10W
R828	ERDS1FJ274	C	270K OHM	J	1/2W	R899	ERG15UJ102	M	1K OHM	J	1W
R829	ERDS2TJ223	C	22K OHM	J	1/4W	R901	TAP1C2Q9RO	PDSISTOR			
R830	ERG2SJ333	M	33K OHM	J	2W	R902	ERDS1FJ103	C	10K OHM	J	1/2W
R831	ERDS1FJ334	C	330K OHM	J	1/2W	R903	ERJ6GEYJ102	M	1K OHM	J	1/10W
R832	ERDS2TJ224	C	220K OHM	J	1/4W	R946	ERQ14AJ100	F	10 OHM	J	1/4W
R833	ERDS2TJ224	C	220K OHM	J	1/4W	R951	ERJ6ENF6042	M	60.4K OHM	F	1/10W
R834	ERG2SJ333	M	33K OHM	J	2W	R952	ERJ6ENF6982	M	69.8K OHM	F	1/10W
R835	ERW2PKR22	M	0.22 OHM	K	2W	R953	ERJ6ENF3742	M	37.4K OHM	F	1/10W
R836	ERD25FJ223K	C	22K OHM	J	1/4W	R954	ERJ6GEYJ881	M	680 OHM	J	1/10W
R837	ERQ14AJ330	F	33 OHM	J	1/4W	R955	ERJ6GEYJ102	M	1K OHM	J	1/10W
R839	ERDS2TJ222	C	2.2K OHM	J	1/4W	R956	ERJ6ENF1741	M	1.74K OHM	F	1/10W
R840	ERDS2TJ222	C	2.2K OHM	J	1/4W	R957	ERJ6ENF3321	M	3.32K OHM	F	1/10W
R841	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R958	ERJ6GEYJ272	M	2.7K OHM	J	1/10W
R842	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R959	ERJ6GEYJ272	M	2.7K OHM	J	1/10W
R843	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R960	ERDS2TJ2R7	C	2.7 OHM	J	1/4W
R844	ERJ6GEYJ122	M	1.2K OHM	J	1/10W	R1001	EROS2CKF75R0	M	75 OHM	F	1/4W
R845	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R1002	ERDS2TJ330	C	33 OHM	J	1/4W
R846	ERD25FJ561K	C	560 OHM	J	1/4W	R1003	ERJ6GCYJ391	M	390 OHM	J	1/8W
R847	ERJ6GEYJ472	M	4.7K OHM	J	1/10W	R1005	ERJ6GEYJ563	M	56K OHM	J	1/10W
R848	ERG15UJ223	M	22K OHM	J	1W	R1051	ERD25FJ681K	C	680 OHM	J	1/4W
R849	ERJ6GEYJ103	M	10K OHM	J	1/10W	R1052	ERDS2TJ102	C	1K OHM	J	1/4W
R850	ERD52TJ103	C	10K OHM	J	1/4W	R1053	ERDS1FJ330	C	33 OHM	J	1/2W
R851	ERJ6GEYOR00	M	0 OHM	J	1/10W	R1054	ERD52TJ224	C	220K OHM	J	1/4W
R852	ERJ6GEYJ102	M	1K OHM	J	1/10W	R1055	ERD52TJ224	C	220K OHM	J	1/4W
R853	ERD25FJ122K	C	1.2K OHM	J	1/4W	R1056	ERDS2TJ223	C	22K OHM	J	1/4W
R854	ERDS2TJ103	C	10K OHM	J	1/4W	R1057	ERJ6GEYJ10G	M	10K OHM	J	1/10W
R857	ERQ14AJR68	F	0.68 OHM	J	1/4W	R1058	ERDS2TJ103	C	10K OHM	J	1/4W

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
R1059	ERJ6GEYU470	M	47 OHM	J	1/10W	R1367	EROS2CKF1653	M	165K OHM	F	1/4W
R1060	ERG1SJ103	M	10K OHM	J	1W	R1368	ERDS2TJ103	C	10K OHM	J	1/4W
R1061	TAR114J0151H	F	150 OHM	V	1/10W	R1369	ERDS2TJ182	C	1.8K OHM	J	1/4W
R1101	EROS2CKF75R0	M	75 OHM	F	1/4W	R1370	ERD52TJ185	C	1.8M OHM	J	1/4W
R1102	ERDS2TJ330	C	33 OHM	J	1/4W	R1371	ERD51FJ103	C	10K OHM	J	1/2W
R1103	ERJ6GCYU391	M	390 OHM	J	1/BW	R1380	ERJ6GEYU152	M	1.5K OHM	J	1/10W
R1105	ERJ6GEYU563	M	56K OHM	J	1/10W	R1381	ERJ6GEYU472	M	4.7K OHM	J	1/10W
R1151	ERD25FJ681K	C	680 OHM	J	1/4W	R1382	ERJ6ENF2001	M	2K OHM	F	1/10W
R1152	ERDS2TJ102	C	1K OHM	J	1/4W	R1383	ERDS2TJ683	C	68K OHM	J	1/4W
R1153	ERDS1FJ330	C	33 OHM	J	1/2W	R1384	ERDS1FJ125	C	1.2M OHM	J	1/2W
R1154	ERDS2TJ224	C	220K OHM	J	1/4W	R1385	ERJ6GCYU222	M	2.2K OHM	J	1/8W
R1155	ERDS2TJ224	C	220K OHM	J	1/4W	R1387	ERJ6GEYU100	M	10 OHM	J	1/10W
R1156	ERDS2TJ223	C	22K OHM	J	1/4W	R1401	ERJ6GEYU101	M	100 OHM	J	1/10W
R1157	ERJ6GEYU103	M	10K OHM	J	1/10W	R1402	ERD25FJ203K	C	20K OHM	J	1/4W
R1158	ERDS2TJ103	C	10K OHM	J	1/4W	R1403	ERJ6ENF6041	M	6.04K OHM	F	1/10W
R1159	ERJ6GEYU470	M	47 OHM	J	1/10W	R1404	ERJ6ENF2742	M	27.4K OHM	F	1/10W
R1160	ERG1SJ103	M	10K OHM	J	1W	R1406	ERJ6GEYU331	M	330 OHM	J	1/10W
R1161	TAR114J0121H	F	120 OHM	J	1/10W	R1407	ERJ6GEYU331	M	330 OHM	J	1/10W
R1201	EROS2CKF75R0	M	75 OHM	F	1/4W	R1408	ERJ6GEYU103	M	10K OHM	J	1/10W
R1202	ERDS2TJ330	C	33 OHM	J	1/4W	R1409	ERJ6GEYU103	M	10K OHM	J	1/10W
R1203	ERJ6GCYU391	M	390 OHM	J	1/BW	OTHERS					
R1205	ERJ6GEYU563	M	56K OHM	J	1/10W		THTFO01		SCREW		
R1251	ERD25FJ681K	C	680 OHM	J	1/4W		TMKK025		MICA SHEET		
R1252	ERDS2TJ102	C	1K OHM	J	1/4W		TUC87574		AC INLET BRACKET		
R1253	ERDS1FJ330	C	33 OHM	J	1/2W		XTV3+12J		SCREW		
R1254	ERD52TJ224	C	220K OHM	J	1/4W		XTV3+8J		SCREW		
R1255	ERDS2TJ224	C	220K OHM	J	1/4W		XWG3F10		WASHER		
R1256	ERDS2TJ223	C	22K OHM	J	1/4W		TSFX15A352		FUSE(3.5A)		
R1257	ERJ6GEYU103	M	10K OHM	J	1/10W		TSF89102		FUSE(1.0A)		
R1258	ERDS2TJ103	C	10K OHM	V	1/4W		FG1		EARTH TERMINAL		
R1259	ERJ6GEYU470	M	47 OHM	J	1/10W		FG3		EARTH LUG		
R1260	ERG1SJ103	M	10K OHM	J	1W		FG4		EARTH LUG		
R1261	TAR114J0331H	F	330 OHM	J	1/10W		FG5		EARTH LUG		
R1301	ERJ6ENF2152	M	21.5K OHM	F	1/10W		FG6		EARTH LUG		
R1302	ERJ6ENF5111	M	5.11K OHM	F	1/10W		FG7		EARTH LUG		
R1304	ERD25FJ101K	C	100 OHM	J	1/4W		FG8		EARTH LUG		
R1305	ERD25FJ101K	C	100 OHM	J	1/4W		F5801		FUSE HOLDER		
R1307	ERJ6GEYU103	M	10K OHM	J	1/10W		F5802		FUSE HOLDER		
R1309	ERJ6GEYU331	M	330 OHM	J	1/10W		N101		4P CONNECTOR(L-TYPE)		
R1310	ERJ6GEYU123	M	12K OHM	J	1/10W		N150		2OP CONNECTOR		
R1311	ERDS1FJ123	C	12K OHM	J	1/2W		N151		2OP CONNECTOR		
R1331	ERJ6GEYU103	M	10K OHM	J	1/10W		N152		2OP CONNECTOR		
R1332	ERJ6GEYU0R00	M	0 OHM		1/10W		N201		SP CONNECTOR		
R1333	ERJ6ENF1002	M	10K OHM	F	1/10W		△ N801		AC SOCKET		
R1334	ERJ6ENF1002	M	10K OHM	F	1/10W		N940		2P CONNECTOR		
R1335	ERDS2TJ562	C	5.6K OHM	J	1/4W		N951		2P CONNECTOR		
R1336	ERJ6GEYU223	M	22K OHM	J	1/10W		N1001		7P CONNECTOR		
R1338	ERJ6GEYU473	M	47K OHM	J	1/10W		N1002		8P CONNECTOR ASSY		
R1339	ERJ6GEYU103	M	10K OHM	J	1/10W		N1002ATJS118650		8P CONNECTOR		
R1340	ERJ6GEYU331	M	330 OHM	J	1/10W		N1003		11P CONNECTOR ASSY		
R1341	ERJ6GEYU822	M	8.2K OHM	J	1/10W		N1003ATJS118680		11P CONNECTOR		
R1342	ERJ6GEYU472	M	4.7K OHM	J	1/10W		△ N1004		CRT SOCKET		
R1343	ERJ6GEYU182	M	1.8K OHM	J	1/10W		N1005		LUG TERMINAL		
R1345	ERJ6GEYU102	M	1K OHM	J	1/10W		N1006		TERMINAL		
R1346	ERJ6GEYU153	M	15K OHM	J	1/10W		N1007		LUG TERMINAL		
R1347	ERJ6GCYU101	M	100 OHM	J	1/8W		N501-1TEL302-9		TERMINAL		
R1361	ERDS1FJ151	C	150 OHM	J	1/2W		N501-2TEL302-9		TERMINAL		
R1362	ERJ6GEYU154	M	150K OHM	J	1/10W		N501-3TEL302-9		TERMINAL		
R1363	ERJ6GEYU154	M	150K OHM	J	1/10W		N501-4TEL302-9		TERMINAL		
R1364	EROS2CKF1502	M	15K OHM	F	1/4W		N901-1TEL302-9		TERMINAL		
R1365	ERG1SJ182	M	1.8K OHM	J	1W		N901-2TEL302-9		TERMINAL		
R1366	ERJ6GEYU222	M	2.2K OHM	J	1/10W						

SAFETY PRECAUTIONS

1 CAUTION:

No modification of any circuit should be attempted. Service work should only be performed after you are thoroughly familiar with all of the following safety checks and servicing guide lines.

2 SAFETY CHECK

Care should be taken while servicing this CRT display because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

3 FIRE & SHOCK HAZARD

- 3-1 Insert an isolation transformer between the CRT display and AC power line before servicing the chassis.
 - 3-2 In servicing pay attention to original lead dress especially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.
 - 3-3 All the protective devices must be reinstalled per original design.
 - 3-4 Soldering must be inspected for possible cold solder joints, frayed leads, damaged insulation, solder splashes or sharp solder points. Be certain to remove all foreign material.

4 LEAKAGE CURRENT COLD CHECK

- 4-1 Unplug the AC cord and connect a jumper between the two prongs on the plug.
 - 4-2 Turn the CRT display power switch "on".
 - 4-3 Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metallic part on the CRT display such as the metal frame, screwheads, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be 1.8 megohm minimum.

5 LEAKAGE CURRENT HOT CHECK

- 5-1 Plug the AC cord directly into the AC outlet. Do not use an isolation transformer during this check.
 - 5-2 Connect a 1500 ohm, 10 watt resistor, paralleled by a $0.15\mu F$ capacitor between each exposed metallic part and a good earth ground (as shown in Fig.1).
 - 5-3 Use an AC voltmeter with 1000 ohm/volt or more sensitivity and measure the AC voltage across the combination 1500 ohm resistor and $0.15\mu F$ capacitor.
 - 5-4 Move the resistor connection to each exposed metallic part and measure the voltage.
 - 5-5 Reverse the polarity of the AC plug in the AC outlet and repeat the above measurement.
 - 5-6 Voltage measured must not exceed 7.5 volt RMS, from any exposed metallic part to ground. A leakage current tester may be used in the above hot check, in which case any current measured must not exceed 5.0 milliamp. In the case of a measurement exceeding the 5.0 milliamp value, a rework is required to eliminate the chance of a shock hazard.

Note: High voltage is present when this CRT display is

operating. Always discharge the anode of the picture tube to the display chassis to prevent shock hazard.

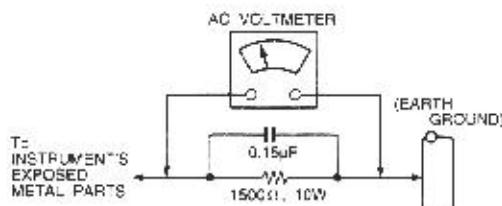


Fig.1

6 IMPLOSION PROTECTION

Picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only Panasonic replacement picture tubes.

7 X-RADIATION

WARNING : The only potential source of X-Radiation is the picture tube. However when the high voltage circuitry is operating properly there is no possibility of X-Radiation problem. The basic precaution which must be exercised is to keep the high voltage at the following factory-recommended level.

Note: It is important to use an accurate periodically calibrated high voltage meter.

- 7-1 The procedure for adjustment high voltage is as shown on page 15.
 - 7-2 If can not be adjust 25.0 KV at immediate service is required to prevent the possibility of premature component failure.
 - 7-3 To prevent X-Radiation possibility it is essential to use the specified picture tube.

IMPORTANT SAFETY NOTICE

There are special components used in this CRT displays which are important for safety. These parts are identified by the international symbol  on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire or other hazards. Do not modify the original design or this will void the original parts and labor guarantee.

GENERAL INFORMATION

1. OUTLINE

V773 is 17 inch multi-scan color CRT display with the following nice features.
OSD (on screen display) Control is newly introduced, which allows easy user adjustment.

2. FEATURES

2-1 Power Saving

Built in Power Saving function based on VESA-DPMS standard.

Power energy shall be saved by controlling the circuit in accordance with power save signal from computer.

2-2 OSD (on screen display) function

OSD (5 languages) is new and excellent man-machine interface.

Anyone is able to set up the picture as he like through OSD menu.

2-3 Self Test function

Self testing picture comes out by pushing any key in the case of no-connection with computer or power saving operation.

This function shows if monitor is alive or not and can be used for self aging test.

2-4 Ergonomic design

- Low emission design to meet MPR II & TCO'92
- ESF (Electro static field) free coating on CRT

2-5 Multi scan with digital technology

• 8 bit micro computer controls the circuit operation to meet with wide range signal of $f_v = 30\text{--}69\text{ kHz}$ and $f_h = 50\text{--}160\text{ Hz}$. So VGA640x350, VGA640x400, VGA640x480, SVGA800x600, 1024x768 and 1280x1024 mode are applicable.

2-6 1 Factory presets, (+7 Reservation), 13 user memories.

- 1 standard mode is preset at the factory.
- 7 modes are reserved at the factory.
- 13 user memories are available to set the users own timing and display information.

2-7 Flat Face and fine dot pitch

• Flat face CRT with a fine dot pitch of 0.27 mm gives a comfortable sight of the screen.

2-8 Superior display performance

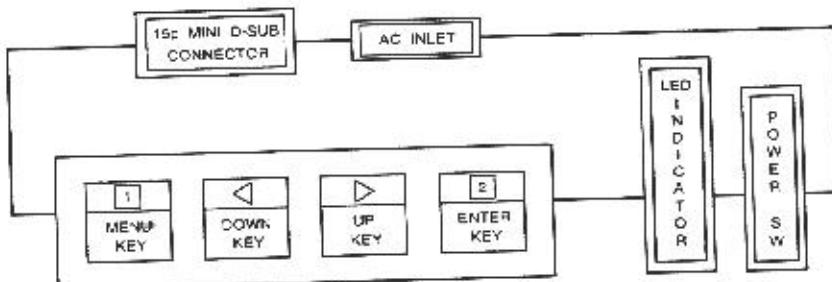
- Good focus by sophisticated gun and dynamic focus circuit
- High contrast
- Minimized distortion by correction circuit
- Good convergence
- Users enjoy full scan image for graphic

2-9 Special function

- VESA DDC1/2B (Display Data Channel) compatible
- Rotation control circuit

SPECIFICATION

1. DIAGRAM



1.1 POWER SW, LED, 1-key (MENU), <-key (DOWN), >-key (UP), and 2-key (ENTER) are located on the front panel.

1.2 Signal cable and AC inlet are located on the back side of the cabinet.

1.3 OSD menu includes the following function.

CONTRAST	BRIGHTNESS	DEGAUSS
RECALL	H POSITION	H SIZE
V POSITION	V SIZE	V PINCUSHION
TRAPEZOID	PARALLELOGRAM	ROTATION

COLOR SELECT

VIDEO INPUT LEVEL

※) CONTRAST can be directly controlled with L/D-key.

※) With sync signal, OSD menu appears by pushing 1-key.
Without sync signal, self test menu appears by pushing 1-key.

DISPLAY FREQUENCY

LANGUAGES

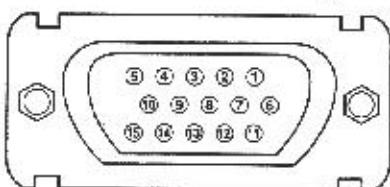
2. MECHANICAL SPECIFICATIONS

..... refer to the attached drawing		
2.1 Dimension	Height : 416 mm (16.4") (typ.)	
	Width : 410 mm (16.1") (typ.)	
	Depth : 441 mm (17.4") (typ.)	
2.2 Net Weight	: 17.5 kg (38.6 lbs) (typ.)	
2.3 Maximum Viewable Phosphor Display Area		
	406.4 mm (16.0") (typ.)	

3. CONNECTORS

3.1 Signal connector:	15P Mini D-Sub cable .. un-detachable
3.2 AC inlet:	CEE 22 typed connector

<15P Mini D-Sub Pin assignment>



1 ... RED	6 ... GROUND	11 ... GROUND
2 ... GREEN	7 ... GROUND	12 ... SDA (DDC)
3 ... BLUE	8 ... GROUND	13 ... H SYNC.
4 ... GROUND	9 ... - (OPEN)	14 ... V. SYNC.
5 ... GROUND (DDC)	10 ... GROUND	15 ... SCL (DDC)

4. CRT SPECIFICATIONS

Part No.	M41LLK27X402
Type	17", 90°, 29z, in-line gun (15.8" Viewable)
Dot Pitch	0.26 mm
Phosphor	R, G, B Short Persistence (Hi-Eu FED)
CIE Color point:	Red x: 0.625 (± 0.015) y: 0.340 (± 0.015) Green x: 0.290 (± 0.015) y: 0.595 (± 0.015) Blue x: 0.150 (± 0.015) y: 0.063 (± 0.015)
Bulb	SEMI TINT
Face	ARECS
Total Transmission	42.8 %

5. ELECTRICAL SPECIFICATIONS

5.1 Standard conditions ... Except special items

Display image	Green, full "H" characters with a border line. (7 x 9 dots) Video signal : 100% duty Display area : 300 mm x 225 mm
Video signal level	0.7 V pp
Contrast, Brightness	Contrast : Max., Brightness : detent point
Ambient Temperature	20±5°C (68 ± 9°F)
Input Voltage	AC 120 V, 60 Hz or AC 220 V, 50 Hz
Terrestrial magnetism	Vertical field : northern hemisphere field 40 µT (southern hemisphere field -40 µT) Horizontal field : no field
Viewing direction	Parallel to the CRT axis
Measurements	After an initial warming up time of more than 30 minutes.
Ambient light	200±50 Ix
Display mode	1024 x 768 (60.02 kHz, 75.03 Hz)

5.2 POWER

5.2.1 Power supply ... Commercial power source

Input voltage	AC 90 - 132 V, AC 198 - 264 V
Power frequency	50 Hz ± 3 Hz, 60 Hz ± 3 Hz
Input current	2.0 A Max. (100 V)
Surge current (at 20°C)	40 A op
Power consumption	110 W (Typ.)

5.2.2 Power Management for Power Saving ...

Power saving system is designed based upon VESA DPMS standard (Version : 1.0)

1) Power consumption and recovery time.

** APM State	SIGNALS			MONITOR POWER CONSUMPTION	RECOVERY TIME TO ON STATE	INDICATOR
	H. Sync	V. Sync	V. DEG			
ON	*3 NOR- MAL	*3 NOR- MAL	*2 ACT- IVE	*4 100%	—	Green
*6 STAN- D BY	No Sync or *5 <6 & Hz	> 40 Hz	BLANK	< 30 W	< 4s	Yellow
SUS- PEND	>10 & Hz *5 <20 Hz	No Sync or *5 <20 Hz	BLANK	< 30 W	< 4s	Yellow
OFF	No Sync or *5 <6 & Hz	No Sync or *5 <20 Hz	BLANK	< 8 W	< 20s	Yellow

** The transition time from ON state to each APM state is 5 seconds minimum.

*1 : APM : Advanced Power Management.

*2 : Means. Condition of power consumption for ON state.

DISPLAY IMAGE : WHITE full "H" characters with a border line (7 x 9 dots).

*3 : NORMAL See '5.3 ACCEPTABLE TIMING'.

*4 : Power Consumption is measured at AC 100-240V.

*5 : Power saving operation is done at least less than specified value in the list.

*6 : Micro controller will supply SUSPEND signal at this mode.

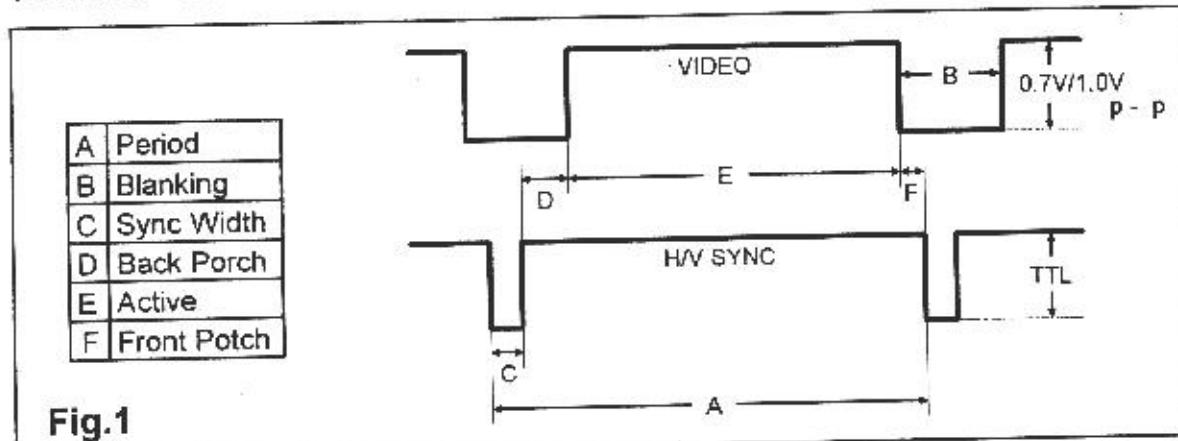
5.3 Standard timing (Standard mode)

• Following 1 mode is preset in the memory as standard timing at the factory and 7 modes are reserved.

• Fig-1 shows a definition of timing and signal level.

• Electrical performance is specified. This SPECIFICATION is specified at STD (1024 x 768) mode unless otherwise mentioned.

TIMING CHART



DOT CLOCK	PRESET		RESERVATION		RESERVATION	
	MODE - 1		MODE - 2		MODE - 3	
	1024 × 768 (75)	78.7500 MHz	640 × 480 (60)	25.1745 MHz	640 × 480 (75)	31.5000 MHz
H	f H	60.0229 kHz		31.4681 kHz		37.5000 kHz
	A - PERIOD	16.660 µs (1,312 dots)		31.778 µs (800 dots)		26.667 µs (840 dots)
	B - BLANKING TIME	3.657 µs (288 dots)		6.356 µs (160 dots)		6.349 µs (200 dots)
	C - SYNC WIDTH	1.219 µs (96 dots)		3.813 µs (96 dots)		2.032 µs (64 dots)
	D - BACK PORCH	2.235 µs (176 dots)		1.946 µs (49 dots)		3.610 µs (120 dots)
	E - ACTIVE TIME	13.003 µs (1,024 dots)		25.423 µs (640 dots)		20.317 µs (640 dots)
V	f V	75.0286 Hz		59.9393 Hz		75.0000 Hz
	A - PERIOD	13.328 ms (800 lines)		16.684 ms (525 lines)		13.333 ms (500 lines)
	B - BLANKING TIME	0.533 ms (32 lines)		1.430 ms (45 lines)		0.533 ms (20 lines)
	C - SYNC WIDTH	0.050 ms (3 lines)		0.064 ms (2 lines)		0.080 ms (3 lines)
	D - BACK PORCH	0.466 ms (28 lines)		1.176 ms (37 lines)		0.427 ms (16 lines)
	E - ACTIVE TIME	12.795 ms (768 lines)		15.254 ms (480 lines)		12.800 ms (480 lines)
SYNC POLARITY(H/V)	F - FRONT PORCH	0.017 ms (1 lines)		0.191 ms (6 lines)		0.027 ms (1 lines)
		Positive / Positive		Negative / Negative		Negative / Negative

DOT CLOCK	RESERVATION		RESERVATION		RESERVATION	
	MODE - 4		MODE - 5		MODE - 6	
	800 × 600 (75)	49.5000 MHz	MAC 832 × 624	57.2832 MHz	1024 × 768 (70)	75.0000 MHz
H	f H	46.8750 kHz		49.7250 kHz		56.4759 kHz
	A - PERIOD	21.333 µs (1,056 dots)		20.111 µs (1,152 dots)		17.707 µs (1,328 dots)
	B - BLANKING TIME	5.172 µs (256 dots)		5.586 µs (320 dots)		4.053 µs (304 dots)
	C - SYNC WIDTH	1.616 µs (80 dots)		1.117 µs (64 dots)		1.813 µs (136 dots)
	D - BACK PORCH	3.232 µs (160 dots)		3.910 µs (224 dots)		1.920 µs (144 dots)
	E - ACTIVE TIME	16.162 µs (800 dots)		14.524 µs (832 dots)		13.653 µs (1,024 dots)
V	F - FRONT PORCH	0.323 µs (16 dots)		0.559 µs (32 dots)		0.320 µs (24 dots)
	f V	75.0000 Hz		74.5502 Hz		70.0694 Hz
	A - PERIOD	13.333 ms (625 lines)		13.414 ms (667 lines)		14.272 ms (806 lines)
	B - BLANKING TIME	0.533 ms (25 lines)		0.865 ms (43 lines)		0.673 ms (38 lines)
	C - SYNC WIDTH	0.064 ms (3 lines)		0.060 ms (3 lines)		0.106 ms (6 lines)
	D - BACK PORCH	0.448 ms (21 lines)		0.784 ms (39 lines)		0.513 ms (29 lines)
SYNC POLARITY(H/V)	E - ACTIVE TIME	12.800 ms (600 lines)		12.549 ms (624 lines)		13.599 ms (768 lines)
	F - FRONT PORCH	0.021 ms (1 lines)		0.020 ms (1 lines)		0.053 ms (3 lines)
Positive / Positive			Negative / Negative		Negative / Negative	

		RESERVATION	RESERVATION
		MODE - 7	MODE - 8
DOT CLOCK		MAC 1024 × 768	1280 × 1024 (60)
H	f H	80.0000 MHz	108.0000 MHz
	A - PERIOD	60.2410 kHz	63.9810 kHz
	B - BLANKING TIME	16.600 µs (1,328 dots)	15.630 µs (1,688 dots)
	C - SYNC WIDTH	3.800 µs (304 dots)	3.778 µs (408 dots)
	D - BACK PORCH	1.200 µs (96 dots)	1.037 µs (112 dots)
	E - ACTIVE TIME	2.200 µs (176 dots)	2.296 µs (248 dots)
V	F - FRONT PORCH	12.800 µs (1,024 dots)	11.852 µs (1,280 dots)
	f V	0.400 µs (32 dots)	0.444 µs (48 dots)
	A - PERIOD	74.9266 Hz	60.0197 Hz
	B - BLANKING TIME	13.346 ms (804 lines)	16.661 ms (1,066 lines)
	C - SYNC WIDTH	0.598 ms (36 lines)	0.656 ms (42 lines)
	D - BACK PORCH	0.050 ms (3 lines)	0.047 ms (3 lines)
	E - ACTIVE TIME	0.498 ms (30 lines)	0.594 ms (38 lines)
	F - FRONT PORCH	12.749 ms (768 lines)	16.005 ms (1,024 lines)
	SYNC POLARITY(H/V)	Negative / Negative	Positive / Positive

		ADJUSTMENT	ADJUSTMENT	ADJUSTMENT
		HV7 - 1	HV7 - 2	HV7 - 3
DOT CLOCK		22.6000 MHz	40.2479 MHz	64.0400 MHz
H	f H	29.5039 kHz	38.9999 kHz	53.9966 kHz
	A - PERIOD	33.894 µs (766 dots)	25.641 µs (1,032 dots)	18.520 µs (1,186 dots)
	B - BLANKING TIME	8.496 µs (192 dots)	3.926 µs (158 dots)	4.497 µs (288 dots)
	C - SYNC WIDTH	4.115 µs (93 dots)	1.491 µs (60 dots)	1.718 µs (110 dots)
	D - BACK PORCH	2.788 µs (63 dots)	2.336 µs (94 dots)	2.186 µs (140 dots)
	E - ACTIVE TIME	25.398 µs (574 dots)	21.715 µs (874 dots)	14.022 µs (896 dots)
V	F - FRONT PORCH	1.593 µs (36 dots)	0.099 µs (4 dots)	0.593 µs (38 dots)
	f V	48.0520 Hz	77.0749 Hz	105.0518 Hz
	A - PERIOD	20.811 ms (614 lines)	12.974 ms (506 lines)	9.519 ms (514 lines)
	B - BLANKING TIME	0.915 ms (27 lines)	0.744 ms (29 lines)	0.482 ms (26 lines)
	C - SYNC WIDTH	0.102 ms (3 lines)	0.103 ms (4 lines)	0.037 ms (2 lines)
	D - BACK PORCH	0.712 ms (21 lines)	0.513 ms (20 lines)	0.352 ms (19 lines)
	E - ACTIVE TIME	19.896 ms (587 lines)	12.231 ms (477 lines)	9.038 ms (488 lines)
	F - FRONT PORCH	0.102 ms (3 lines)	0.128 ms (5 lines)	0.093 ms (5 lines)
	SYNC POLARITY(H/V)	Negative / Negative	Negative / Negative	Negative / Negative

		ADJUSTMENT
		HV7 - 4
DOT CLOCK		93.4300 MHz
H	f H	69.9850 kHz
	A - PERIOD	14.289 µs (1,335 dots)
	B - BLANKING TIME	3.329 µs (311 dots)
	C - SYNC WIDTH	1.092 µs (102 dots)
	D - BACK PORCH	1.820 µs (170 dots)
	E - ACTIVE TIME	10.960 µs (1,024 dots)
V	F - FRONT PORCH	0.417 µs (39 dots)
	f V	165.0590 Hz
	A - PERIOD	6.058 ms (424 lines)
	B - BLANKING TIME	0.457 ms (32 lines)
	C - SYNC WIDTH	0.043 ms (3 lines)
	D - BACK PORCH	0.343 ms (24 lines)
	E - ACTIVE TIME	5.601 ms (392 lines)
	F - FRONT PORCH	0.071 ms (5 lines)
	SYNC POLARITY(H/V)	Negative / Negative

5.4 Acceptable timing

- If your timing is within following specification, this CRT display can automatically function with a certain size and position.

Horizontal: Sync frequency: 30.0 ~ 69.0 kHz
 Blanking Time: $\geq 3.4 \mu s$
 Back Porch: $\geq 1.25 \mu s$
 Front Porch: \leq Back Porch
 Sync Width: $\geq 1.2 \mu s$

Vertical: Sync frequency: 50.0 ~ 160.0 Hz
 Blanking Time: $\geq 0.5 ms$
 Back Porch: $\geq 0.4 ms$
 Sync Width: $\geq 0.045 ms$

- Several items like size, position and distortion can be adjusted through OSD menu, and if you want to keep it, please push the key [1] for memory, or keep the key untouched for about 20 seconds, it is automatically memorized.

NOTE: In case of RECALL, the key is untouched for about 30 seconds, RECALL function will be cancelled.

Please note, however, that there is the case you can not get the size and/or position you want, (for example, in case Display video Time is too short, you can't get bigger size of the image.)

- The CRT adopted in this CRT display is designed to minimize the moire phenomenon at suitable size for typical display modes. However, there might be a display format among many formats, in which the moire phenomenon appears on this display.

5.5 Signal level and input impedance

5.5.1 Video Signal level

- This CRT display is adjusted at the factory using 0.7Vpp Video Signal. Black level is 0 V.
- This CRT display is compatible with 1.0Vpp Video signal by using Video input level selection.

5.5.2 Sync Signal level

- H/V Separate, H/V Mixed : TTL level
- Sync on Green : 0.3 V p-p $\pm 0.015 V$

5.5.3 Input impedance

- Video input: 75Ω
- Sync input: $\geq 1 k\Omega$

5.6 Display performance

5.6.1 Display area

1) PRESET TIMING

MODE 1

WIDTH : $300 \text{ mm} \pm 5 \text{ mm}$

HEIGHT : $225 \text{ mm} \pm 5 \text{ mm}$

2) RESERVATION TIMING

MODE 2~7

WIDTH : $300 \text{ mm} \pm 7 \text{ mm}$

HEIGHT : $225 \text{ mm} \pm 7 \text{ mm}$

MODE 8

286 mm $\pm 7 \text{ mm}$

229 mm $\pm 7 \text{ mm}$

5.6.2 Centering

1) PRESET TIMING (MODE1)

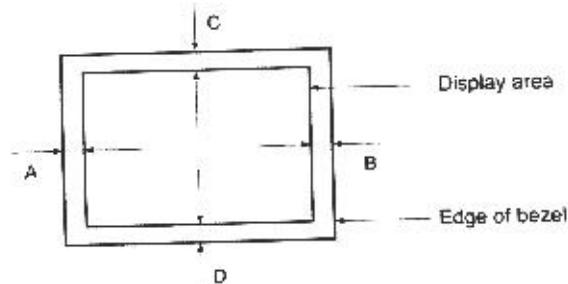
|A - B| $\leq 4 \text{ mm}$

|C - D| $\leq 4 \text{ mm}$

2) RESERVATION TIMING (MODE2~8)

|A - B| $\leq 7 \text{ mm}$

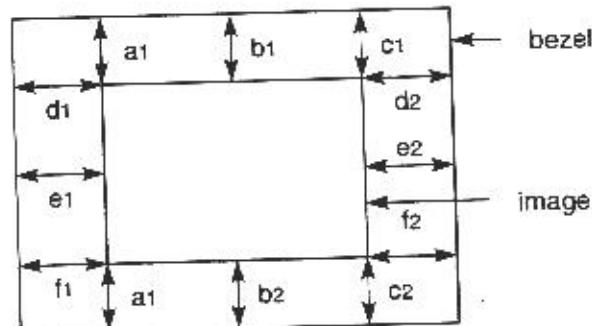
|C - D| $\leq 7 \text{ mm}$



5.6.3 Distortion

Combined distortion

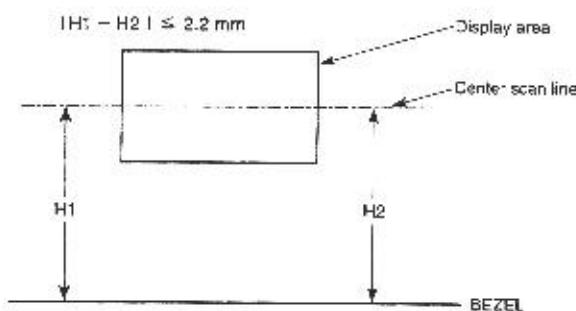
a1 - b1 , b1 - c1 , c1 - a1	$\leq 2.5 \text{ mm}$
a2 - b2 , b2 - c2 , c2 - a2	$\leq 2.5 \text{ mm}$
d1 - e1 , e1 - f1 , f1 - d1	$\leq 2.5 \text{ mm}$
d2 - e2 , e2 - f2 , f2 - d2	$\leq 2.5 \text{ mm}$



- Test condition : 7.1 Standard Condition
- Image Size : 300 x 225 mm
- User control : AS Shipped

5.6.4 Rotation

$|H_1 - H_2| \leq 2.5 \text{ mm}$
 $\leq 0 \text{ mm} \text{ (after user adjustment)}$



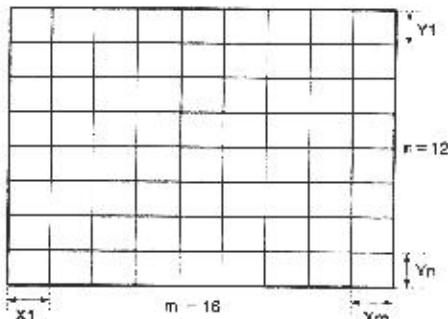
5.6.5 Linearity

Horizontal linearity

$$= \frac{X_{\max.} - X_{\min.}}{X_{\max.} + X_{\min.}} \times 100\% \quad \leq 6\% \text{ (48 - 64kHz)} \\ \leq 7\% \text{ (except above frequency range)}$$

Vertical linearity

$$= \frac{Y_{\max.} - Y_{\min.}}{Y_{\max.} + Y_{\min.}} \times 100\% \quad \leq 5\% \text{ (60 - 75Hz)} \\ \leq 6\% \text{ (except above frequency range)}$$



<Conditions>

Display image ----- crosshatch pattern

Maximum and minimum values should not be adjacent to each other.

$X_{\max.}$ is maximum value among $X_1 \sim X_m$.

$X_{\min.}$ is minimum value among $X_1 \sim X_m$.

$Y_{\max.}$ is maximum value among $Y_1 \sim Y_n$

$Y_{\min.}$ is minimum value among $Y_1 \sim Y_n$

5.7 General performance

5.7.1 Video output

Bandwidth	86 MHz (Typ.)
-----------	---------------

5.7.2 Maximum luminance

Value	130 cd/m ² (Typ.) for 5% white field at the center of the display area.
	103 cd/m ² (Typ.) for 100% white field at the center of the display area. Specified by 9300 K + 8 MPCD

Conditions: Display image : White full flat field
Luminance : Max. (Contrast : Max.)
(Brightness : CENTER point)

5.7.3 Minimum luminance

Value	≤ 26 cd/m ² at the center of the display area. Specified by 9300 K + 8 MPCD
	Display image : White full flat field Conditions Luminance : Min. (Contrast : Min.) (Brightness : CENTER point)

5.7.4 Brightness variation

Value	70 % (Min.) Variation = C/A X 100
Conditions	Display image : White full flat field Luminance : MAX (Contrast : MAX) (Brightness : Detent point) A : Luminance at center position C : Luminance at position of lowest brightness

5.7.5 Display area regulation

	Display area variation	Range of variation
Due to Luminance	within 1.0 %	26~133 cd/m ² (white flat field)
Due to Power Supply	within 0.5 %	AC : 90~132 V or 198~264 V
Due to Temperature	within 1.0 %	20° C ± 20° C

5.7.6 Color Point

< Conditions >

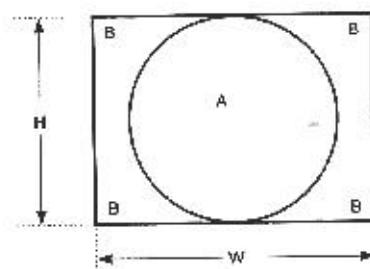
Display image : White flat field at the center of the display area.

Luminance : Brightness Detent point.

Contrast:	max	min
Value	9300 K + 8 MPCD $x = 0.283 \pm 0.020$ $y = 0.298 \pm 0.020$	9300 K + 8 MPCD $x = 0.283 \pm 0.020$ $y = 0.298 \pm 0.020$

5.7.7 Misconvergence

Center area of display (A) : 0.3 mm (Max.)
Corner area of display (B) : 0.4 mm (Max.)



< Conditions >

Display image : Crosshatch pattern mixed with R, G and B colors.

Convergence gauge : KLEIN CM7AG or equivalent.

Display area : W x H = 300 x 225 mm

5.7.8 Purity

Conscious mislading shall not be visible within display area at a distance of 60cm from CRT surface.

< Conditions >

Display image : Red/Green/Blue flat field

Luminance : Contrast max,
Brightness CENTER

Display area : 300 x 225 mm

5.7.9 White Uniformity

$xa - xc \leq \pm 0.015$

$ya - yc \leq \pm 0.015$

xa : x coordinate at the CRT center

xc : x coordinate at any other point:

ya : y coordinate at the CRT center

yc : y coordinate at any other point

< Conditions >

Display image : White flat field
Luminance : 103 cd/m² at the center of display area

Display area : 300 x 225 mm

5.7.10 Jitter

Invisible at a distance of 60 cm from CRT surface

6. ENVIRONMENTS

6.1 Ambient temperature, humidity and altitude

	Operating	Storage and shipment
Temperature	0 ~ 40° C (32 ~ 104° F)	-20 ~ +60° C (-4 ~ 140° F)
Humidity	5 ~ 90 % *	5 ~ 90 % *
Altitude	3,000 m (Max.) (10,000 ft)	12,000 m (Max.) (40,000 ft)

* Non-condensation

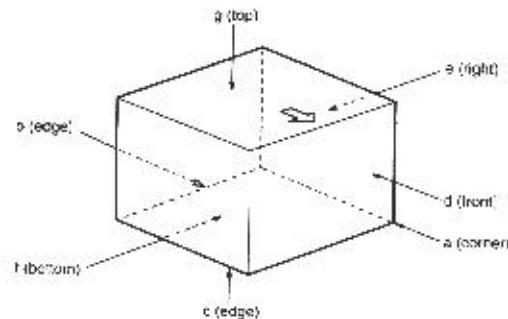
6.2 Vibration and shock

6.2.1 Vibration

	Order of tests	Direction of vibration	Acceleration Non-operation	Storage and shipment	Frequency	Sweep	Test time
Unpacked	1	Vertical	Up to down	2.9 m/s ² (0.3 G)	5 - 55 Hz	120 s	30 min.
	2	Horizontal	Front to back				15 min.
	3		Right to left				
Packed	1	Vertical	Up to down	12.3 m/s ² (1.0 G)	5 - 50 Hz	810 s	40 min
	2	Horizontal	Front to back				
	3		Right to left				20 min.
						Logsweep	

6.2.2 Shock (Drop test)

Unpacked	20 G One time for each face (6 faces) (non-operation)			
Packed	Order of drop	Face to drop is to face the floor. (See the figure)	Height	Number of drop
	1	a, b, c, d, e, g	60 cm	1 time for each
	2	f	70 cm	



7. REGULATORY STANDARDS

7.1 Safety standards

Applicable standards

- UL 1950 : Listing
- CSA 22.2 No. 950 : Certification
- TÜV EN60950 (EC-950) / GS (ZH1)
- NORDIC (SEMKO, NEMKO, DEMKO, FIMKO)
- Energy Star

CE Marking

<EMI test pattern>

White, full 'H' characters (9 x 14 dots), block (12 x 24 dots)

7.2 X-Ray standards

Applicable standards

- DHHS, 21CFR subchapter J
- PTB ; (Self Protected CRT)
- HC

8. POWER CORD

- Northern Hemisphere Version (North America and Japan)

... UL/CSA approved power cord (Wall Type)

- European Version

... VDE approved power cord (PC Type)

7.3 EMC standards

Applicable standards

- VCCI class 2
- FCC part 15, subpart B, class B
- IC class B
- CISPR22 class B (EN55022)

9. SIGNAL CABLE

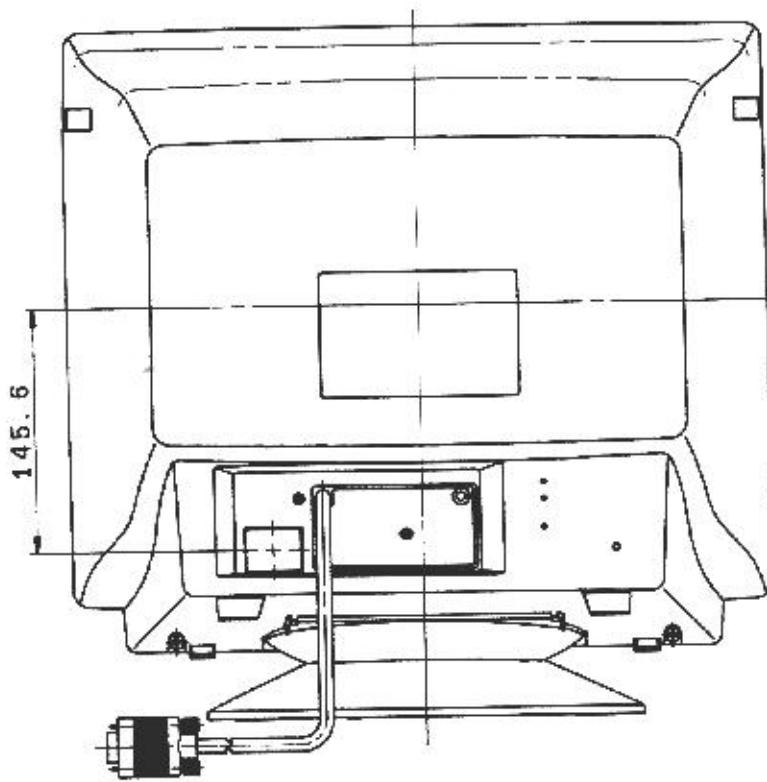
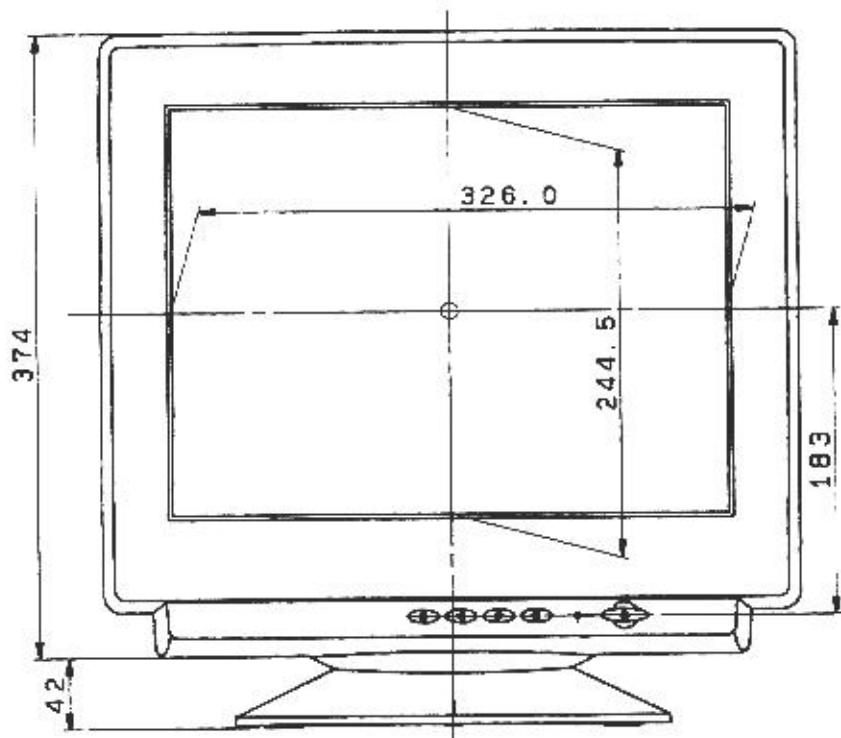
Un-detachable signal cable with Mini D-Sub 15P connectors is installed in the monitor.

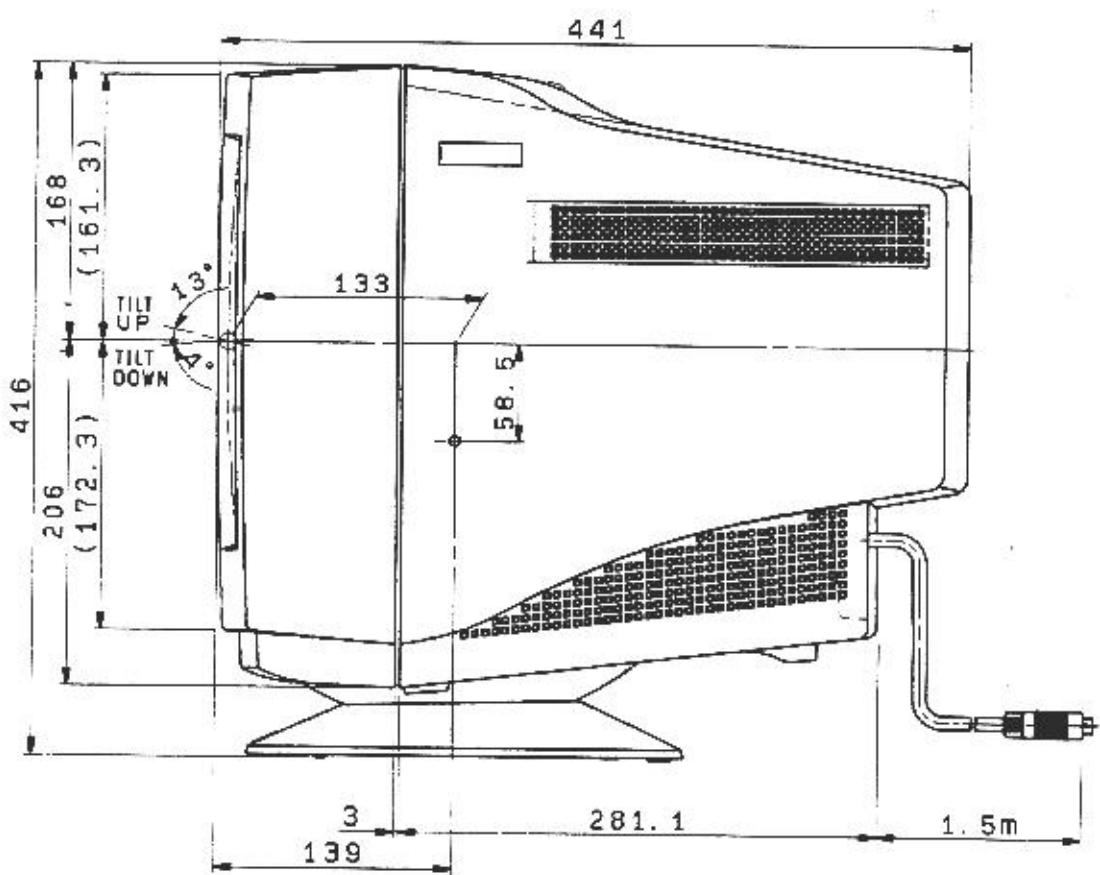
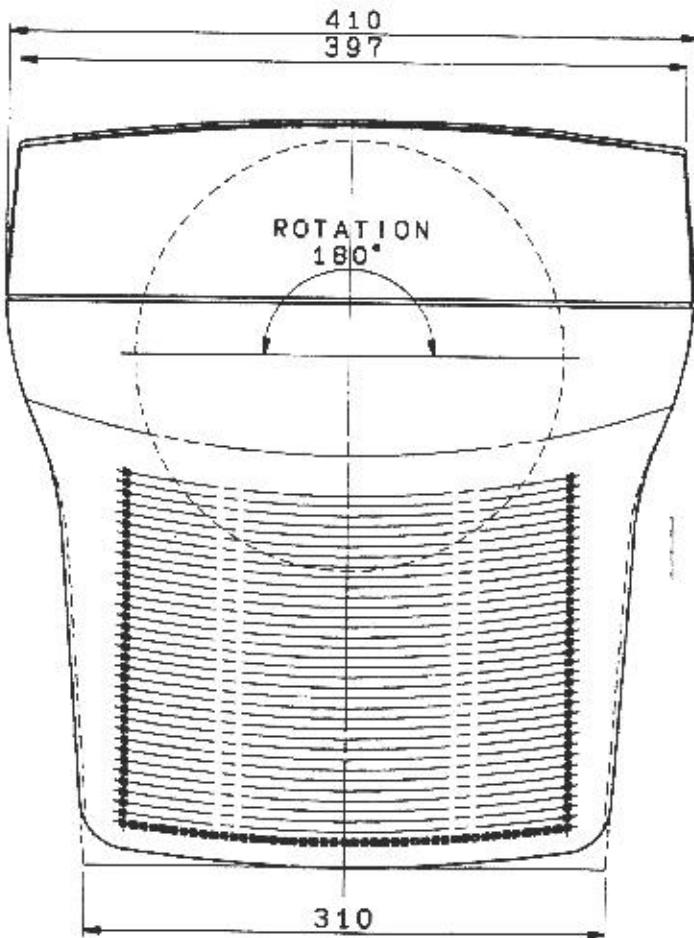
Length : 1.5 meter (4.93 feet)

10. RELIABILITY

> 55,000 hrs (demonstrated MTBF)

DIMENSIONS





REQUIRED ADJUSTMENT PROCEDURE AFTER A PARTS IS REPLACED (✓ IS REQUIRED)

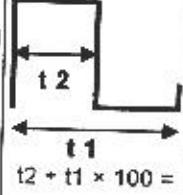
ADJUSTMENT ITEM	REPLACED PARTS																
	MAIN P.C.B.	CTL P.C.B.	VIDEO P.C.B.	CRT DY	IC1301 IC1302 IC1401	Q1051 Q1052 Q1151	IC401	IC501	Q673 Q674 Q675	Q581 Q582	IC521 Q521	Q522 FBT	IC821 Q821 FBT	IC103	IC104	IC101	IC902
A DATA SETTING *	✓	✓											✓	✓	✓	✓	✓
B +B ADJUST	✓	✓											✓	✓	✓	✓	✓
C H. DRIVE DUTY	✓	✓											✓	✓	✓	✓	✓
D H. DRIVE +B	✓	✓											✓	✓	✓	✓	✓
E EHT	✓	✓											✓	✓	✓	✓	✓
F H. CENTER	✓	✓											✓	✓	✓	✓	✓
G H.V. SIZE / POSI V.PCC (1)	✓	✓											✓	✓	✓	✓	✓
H Y.LIN(C)	✓	✓											✓	✓	✓	✓	✓
I H.V. SIZE / POSI V.PCC (2)	✓	✓											✓	✓	✓	✓	✓
J BRIGHTNESS, COLOR	✓	✓											✓	✓	✓	✓	✓
K FOCUS	✓	✓											✓	✓	✓	✓	✓
L FINAL TUNE	✓	✓											✓	✓	✓	✓	✓
M DATA SAVING	✓	✓											✓	✓	✓	✓	✓
PURITY & CONVERGENCE	✓	✓											✓	✓	✓	✓	✓
SCREEN CHECK	✓	✓											✓	✓	✓	✓	✓

* (A) DATA SETTING : Do not load standard data except when main PCB (With/CTL PCB) and IC902(EEPROM) are replaced.

CTL. PCB = Micro controller and DAC PCB.

ADJUSTMENT PROCEDURE

1. Description of Adjustment Method

Program Menu Item	◆ Test Meter ▼ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
STANDARD DATA SETTING 1) Load data from FILE	▼ D864 ~ GND Refer to service adjustment control location on page 23	A1 A2 A3 A4 AE		<p>Do not connect the power and signal cable to monitor.</p> <p>Apply 15V to D864 CATHODE and GND. (Do not apply 5V to IC101. Because IC862 will supply the 5V and RESET signal to IC101)</p> <p>Set the cell to the program menu item at left and press </p> <p>A message FILE -> EEPROM FILE NAME (q or Q escape) []: is displayed. So type in "DACDATA.DAT" (when using the standard data) and press </p> <p>Disconnect 15V cable, then turn on the power switch of the monitor.</p>	
Do not load standard data except when Main P.C.B. and EEPROM are replaced.					
+B ADJUST	◆ Digital voltmeter ▼ TP4 ~ GND □ RGB OFF (SYNC ONLY)	B1 B2	HV7-1	<p>Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz].</p> <p>Make the adjustment to the value shown at right by turning the VR881 on the main PCB.</p>	80V ±0.5V
H. DRIVE DUTY 2) Adjust VSR setting	◆ Oscilloscope ▼ TP3 ~ GND □ Crosshatch Oscilloscope Range HV7-1 10μs/div. HV7-2 5μs/div. HV7-3 5μs/div. HV7-4 2μs/div.	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 CE	HV7-1 HV7-2 HV7-3 HV7-4	<p>Set the cell to the program menu item at left and press </p> <p>Set the cell to the adjusting mode <u>INTP [0]</u> and press </p> <p>Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz] and press </p> <p>Set the cell to <u>H. DRIVE DUTY</u> and press </p> <p>Make the adjustment to the value shown at right by using and .</p> <p>Register by pressing and return to program menu item of C2 by pressing </p> <p>Input signal [fH 39.0KHz] and [fV 77.1Hz] Select Adjusting mode <u>INTP [1]</u>, and repeat above (C3 ~ C6) procedures.</p> <p>Input signal [fH 54.0KHz] and [fV 105.0Hz] Select Adjusting mode <u>INTP [2]</u>, and repeat above (C3 ~ C6) procedures.</p> <p>Input signal [fH 70.0KHz] and [fV 165.0Hz] Select Adjusting mode <u>INTP [3]</u>, and repeat above (C3 ~ C6) procedures.</p> <p>Press to return to main menu.</p>	 $t_2 + t_1 \times 100 =$ $53\% \pm 3\%$ $51\% \pm 3\%$ $48.5\% \pm 3\%$ $46\% \pm 3\%$

Note 1 : Check to be sure that the program disk name is V773 before making necessary adjustment.

Note 2 : Unless otherwise specified, the monitor state is as given at right.

Program Menu Item		JOB CODE	Input Signal	Operation	Adjusting Value		
D	H. DRIVE +B 2) Adjust VSR setting	<input checked="" type="checkbox"/> Test Meter <input checked="" type="checkbox"/> Test Point <input type="checkbox"/> Pattern	D1	Set the cell to the program menu item at left and press [A] .			
			D2	Set the cell to the adjusting mode <u>INTP [0]</u> and press [A] .			
			D3	HV7-1 Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz] and press [A] .			
			D4	Set the cell to <u>H. DRIVE +B</u> and press [A] .			
			D5	Make the adjustment to the value shown at right by using [+] and [−] .			
			D6	Register by press [E] and return to menu of D2 by press [E] .			
			D7	HV7-2 Input signal [fH 39.0KHz] and [fV 77.1Hz]			
			D8	Select Adjusting mode <u>INTP [1]</u> , and repeat above (D3 ~ D6) procedures.	19.0V ±0.5V		
			D9	HV7-3 Input signal [fH 54.0KHz] and [fV 105.0Hz]			
			D10	Select Adjusting mode <u>INTP [2]</u> , and repeat above (D3 ~ D6) procedures.	17.0V ±0.5V		
			D11	HV7-4 Input signal [fH 70.0KHz] and [fV 165.0Hz]			
			D12	Select Adjusting mode <u>INTP [3]</u> , and repeat above (D3 ~ D6) procedures.	14.5V ±0.5V		
			DE	Press [E] to return to main menu.			
E	EHT ADJUST 2) Adjust VSR setting 7) Special ADJUST B: CALCULATE H.OUT +B	<input checked="" type="checkbox"/> Digital voltmeter <input checked="" type="checkbox"/> TP1 ~ GND <input type="checkbox"/> RGB off (Sync only)	E1	Set the cell to the program menu item at left and press [A] .			
			E2	Set the cell to the adjusting mode <u>INTP[3]</u> and press [A] .			
			E3	HV7-4 Check that the input signal to the monitor is [fH 70.0KHz] and [fV 165.0Hz] and press [A] .			
			E4	Move the cell to <u>H OUT +B</u> and press [A] .			
			E5	Make adjustment to the value shown at right by using [+] and [−] .			
			E6	Register by pressing [E] and return to the main menu by pressing [E] .			
			E7	Set the cell to the program menu item at left and press [A] .			
			E8	Select the <u>B: CALCULATE H.OUT +B</u> from the menu. This message will appear : H +B Data Calculated . Hit Return Key !			
			E9	Press [E] to return to menu of E8.			
			EE	Press [E] to return to the main menu.			
F	H. CENTER	<input type="checkbox"/> RGB off (Sync only)	F1	Set the Brightness to MAX on the OSD.	A		
			F2	Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz].	A=B		
			F3	Make the adjustment as shown at right by turning the VR581 on the main PCB.	B		
							
				Set the raster to the center with respect to the bezel.			

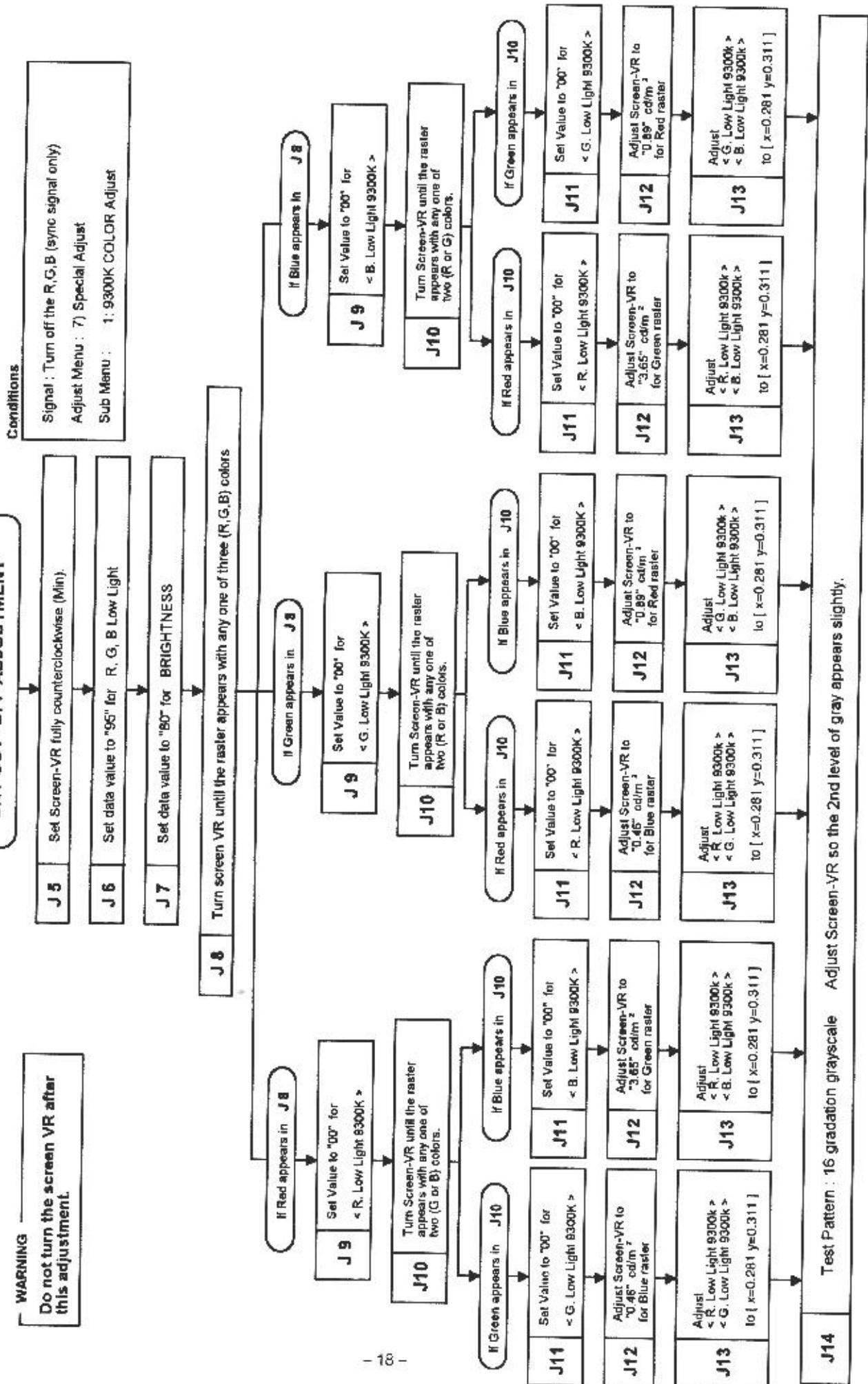
Program Menu Item	◇ Test Meter ▼ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
H/V. SIZE, POSI and V. PCC (1) 4) Adjust Factory preset	□ Crosshatch	G1 G2 G3 GE	Mode-1	<p>Set the cell to the program menu item at left and press \square.</p> <p>Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz] and press \square.</p> <p>Set the cell to following items, press \square and make the adjustments to the values shown at right by using \square and \square.</p> <ul style="list-style-type: none"> ① H. SIZE ② H. POSI ③ V. SIZE ④ V. POSI ⑤ V. PCC ⑥ V. PCC PARALLELOGRAM ⑦ V. PCC TRAPEZOID <p>After adjustment, return to the main menu by using \square and \square.</p>	H : 300mm \pm 5 V : 225mm \pm 5 H/V Posi : Center V. PCC : Best point
V. LIN (C) 3) Adjust STD setting	□ Crosshatch	H1 H2 H3 HE	Mode-1	<p>Set the cell to the program menu item at left and press \square.</p> <p>Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz] and press \square.</p> <p>Set the cell to V. LIN C and press \square.</p> <p>make the adjustment to the best point by using \square and \square.</p> <p>After adjustment, return to the main menu by using \square.</p>	
H/V. SIZE, POSI and V. PCC (2) 2) Adjust VSR Setting	□ Crosshatch	I1 I2 I3 I4 I5 I6 I7 I8 I9 I10 I11 IE	HV7-1 HV7-2 HV7-3 HV7-4	<p>Set the cell to the program menu item at left and press \square.</p> <p>Set the cell to the adjusting mode INTP [0] and press \square.</p> <p>Check that the input signal to the monitor is [fH 29.5KHz] and [fV 48.0Hz] and press \square.</p> <p>Set the cell to following items, press \square and make the adjustments to the values shown at right by using \square and \square.</p> <ul style="list-style-type: none"> ① H. SIZE ② H. POSI ③ V. SIZE ④ V. POSI ⑤ V. PCC ⑥ V. LIN (S) <p>Except H. SIZE and V. LIN(C), other items do not register to the interpolation data.</p> <p>After adjusting the above, return to menu of I2 by using \square.</p> <p>Input signal [fH 39.0KHz] and [fV 77.1Hz] Select Adjusting mode INTP [1], and repeat above (I3 ~ I5) procedures.</p> <p>Input signal [fH 54.0KHz] and [fV 105.0Hz] Select Adjusting mode INTP [2], and repeat above (I3 ~ I5) procedures.</p> <p>Input signal [fH 70.0KHz] and [fV 165.0Hz] Select Adjusting mode INTP [3], and repeat above (I3 ~ I5) procedures.</p> <p>After adjustment, return to the main menu by press \square.</p>	H : 300mm \pm 5 V : 225mm \pm 5 H/V Posi : Center V. PCC : Best point V. LIN : Best point

ITEM Program Menu	<input checked="" type="checkbox"/> Test Meter <input type="checkbox"/> Test Point <input type="checkbox"/> Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
CRT CUT-OFF	<input checked="" type="checkbox"/> TV Color Analyzer II <input type="checkbox"/> RGB Off (Sync only)	J1 J2 J3 J4 J5 ↓ J14	Mode-1	<p>Set the Contrast to MAX, Brightness to Center and Color is 9300K using the OSD.</p> <p>Check that the input signal to the monitor is [fH 60.0KHz], [fV 75.0Hz] and turn off the RGB signal</p> <p>Set the cell to the menu at left and press  </p> <p>Select <u>1: 9300K COLOR Adjust</u> from the menu.</p> <p>Make the adjustment <u>R, G and B Low Light</u> by using   and Screen VR to CRT cut-off.</p> <p>Please refer to flow chart for this adjustment on page 18.</p>	
7) Special ADJUST 1: 9300K COLOR Adjust		J15 J16 J17 J18		<p>Change to the pattern at left</p> <p>Move the cell to the following items and make the adjustment to the value shown at right by using  and </p> <p><u>R. SUB CONT 9300K</u> <u>G. SUB CONT 9300K</u> <u>B. SUB CONT 9300K</u></p> <p>Set Contrast to MIN using the OSD.</p> <p>Move the cell to the following items and make the adjustment to the value shown at right by using  and </p> <p><u>R. LOW LIGHT 9300K</u> <u>G. LOW LIGHT 9300K</u> <u>B. LOW LIGHT 9300K</u></p> <p>Adjust two colors only out of above three as shown in J13 on page 18.</p>	$Y=130 \text{ cd/m}^2$ $x=0.283 \pm 0.20$ $y=0.298 \pm 0.20$
ABL	<input type="checkbox"/> White flat field (full window)	J19 J20 J21		<p>Change to the pattern at left</p> <p>Move the cell to <u>ABL</u> and make the adjustment to the value shown at right by using  and </p> <p>Press  to return to menu of J4</p>	$Y=113 \text{ cd/m}^2$
1.0V ADJUST	<input type="checkbox"/> White window (5cm×5cm at center) 1.0V p-p video*	J22 J23 J24 J25 J26 J27		<p>Change to the pattern at left.*</p> <p>Set the cell to the menu at left and press  </p> <p>Select the <u>4: VIDEO 1.0Vpp ADJUST</u> from the menu.</p> <p>Set Input Video Level 1.0V using the OSD of the monitor.</p> <p>Make the adjustment to the value shown at right by using  and </p> <p>Press  to return to menu of J24</p>	$Y=130 \text{ cd/m}^2$
DATA SETTING		J28 JE		<p>Select the <u>7: BRIGHTNESS LIMIT SETTING</u> from the menu.</p> <p>Press  to return to menu of J28 and Press  to return to the main menu.</p>	

Should make Final Tune after this adjustment refer to item L on page 19.

CRT CUT-OFF ADJUSTMENT

WARNING _____
Do not turn the screen VR after
this adjustment.



Program Menu Item		◇ Test Meter ▼ Test Point □ Pattern	JOB CODE	Input Signal	Operation	Adjusting Value
K	FOCUS	□ Character	K1	Mode-1	Check that the input signal to the monitor is [fH 60.0KHz] and [fV 75.0Hz].	
			K2		Make the corner sections of the screen optimum by turning D-FOCUS VR on the FBT.	
			K3		Make the center section optimum by turning S-FOCUS VR on the FBT.	
			K4		Repeat K2 and K3 to make it optimum.	
L	FINAL TUNE 7) Special ADJUST		L1		Set the cell to the program menu item at left and press <input checked="" type="checkbox"/> .	
			L2		Select the 9:FINAL TUNE from the program menu item. (Step 1):Data tuning. These messages will appear : <loading EEPROM data> ...end <tuning EEPROM data> ... end <saving data to EEPROM> ... end <RECALL data - PRESET data> wait a moment	
			L3		(Step 2):Erase user preset data. Erase All ' user preset data OK ? > Press <input checked="" type="checkbox"/> or <input type="checkbox"/> and <input checked="" type="checkbox"/> , go to L4.	
			L4		(Step 3):Calculate color data. COLOR 6550K data OK ? >, press <input checked="" type="checkbox"/> and <input checked="" type="checkbox"/> USER COLOR data OK ? >, press <input checked="" type="checkbox"/> and <input checked="" type="checkbox"/> ABL data OK ? >, press <input checked="" type="checkbox"/> and <input checked="" type="checkbox"/> finished . (Hit return key)	
			L5		Press <input checked="" type="checkbox"/> , go to L8.	
			L6		(Step 4):Set brightness data and flag. <SET FLAG> wait a moment ... end	
			L7		tune end . Hit return key !	
			LB		Press <input checked="" type="checkbox"/> , return to menu of L2.	
			LE		Press <input checked="" type="checkbox"/> and <input checked="" type="checkbox"/> , to return to the main menu.	
M	DATA SAVING 6) Save data to file		M1		Set the cell to the program menu item at left and press <input checked="" type="checkbox"/> .	
			M2		Key in the file name after [] : Use serial number as a file name (EXAMPLE : FF5110001 = "F5110001.DAT")	

SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE

The component identified by shading or international symbol  on the following schematic diagrams incorporate special features important for protection from X-Radiation, fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for those critical components.

NOTES :

1. RESISTOR

All resistors are carbon 1/4W resistor, Unless otherwise noted by the following marks.
Unit of resistance is ohm (Ω), (K = 1,000, M = 1,000,000)

 : Non Flammable	 : Solid
 : Metal Oxide	 : Metal (Precision and high stability)
 : Wire Wound	 : Thermistor
 : Fusible	 : Positive coefficient Thermistor
 : Flame Proof Rectangular	

2. CAPACITOR

All capacitors are ceramic 50V capacitor, unless otherwise noted by the following marks.
Unit of capacitance is μF , unless otherwise noted.

 : Electrolytic	 : Polyester
 : Tantalum	 : Metallized Polyester
 : Bipolar	 : Polypropylene
 : Polystyrene	 : Mica
 : Temperature Compensation	 : Ceramic
	 : Ceramic (SL)

3. COIL

Unit of inductance is μH , unless otherwise noted.

4. VOLTAGE MEASUREMENT

Voltage is measured by a digital meter receiving normal signal.

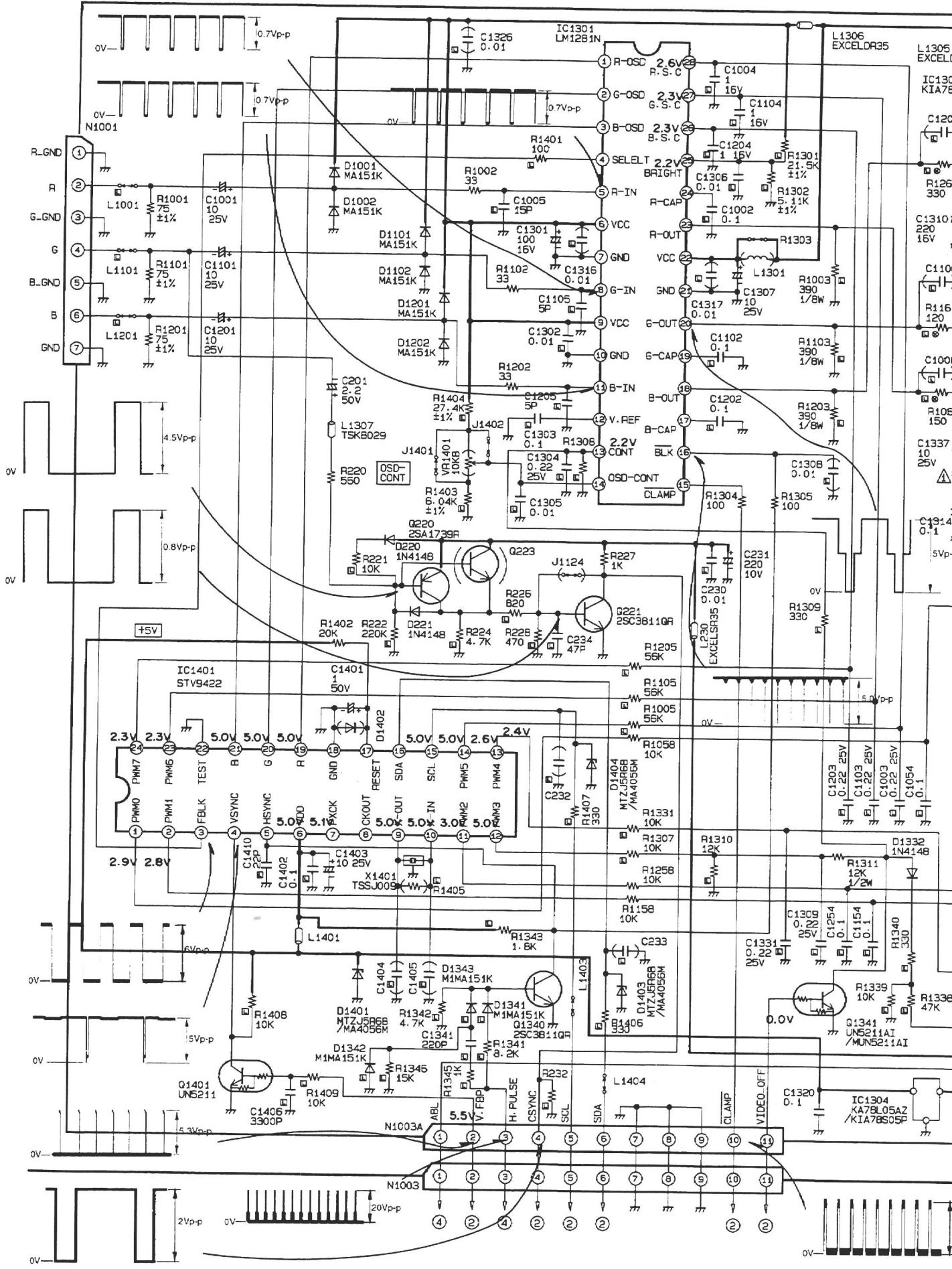
5. This schematic diagram is the latest at the time of printing and is subject to change without notice.

SERVICE NOTES :

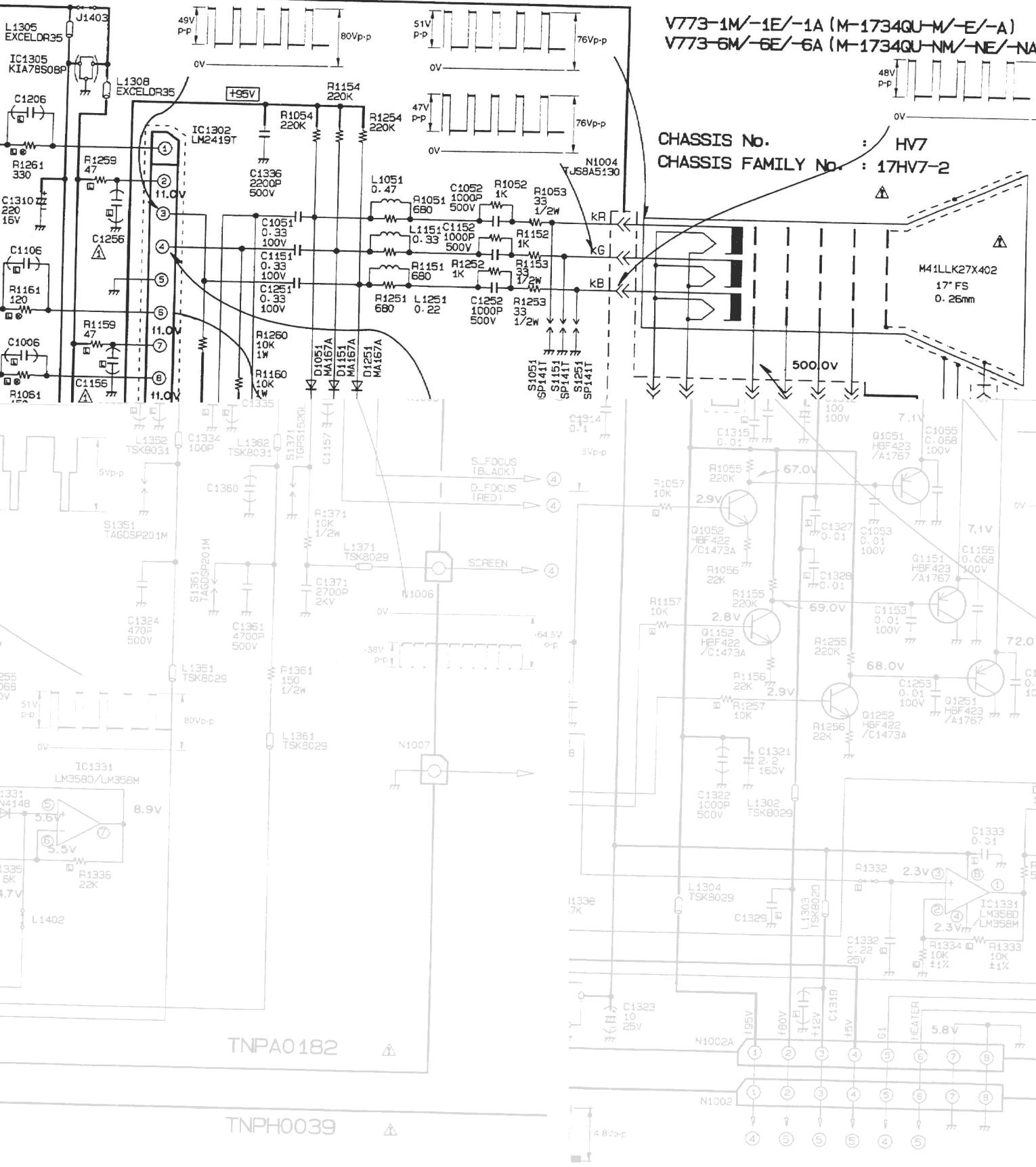
This model has a section that does not share a common ground with the power supply section. The different sections are referred to as the HOT section and the COLD section in the precautions below.

1. Do not touch the HOT section and the COLD section at the same time. You may receive an electric shock.
2. Do not short the HOT section to the COLD section. This could blow the fuse or damage parts.
3. Never measure the HOT section and the COLD section at the same time when using tools such as oscilloscopes or multimeters.
4. Always unplug the unit before beginning any operation such as removing the chassis.

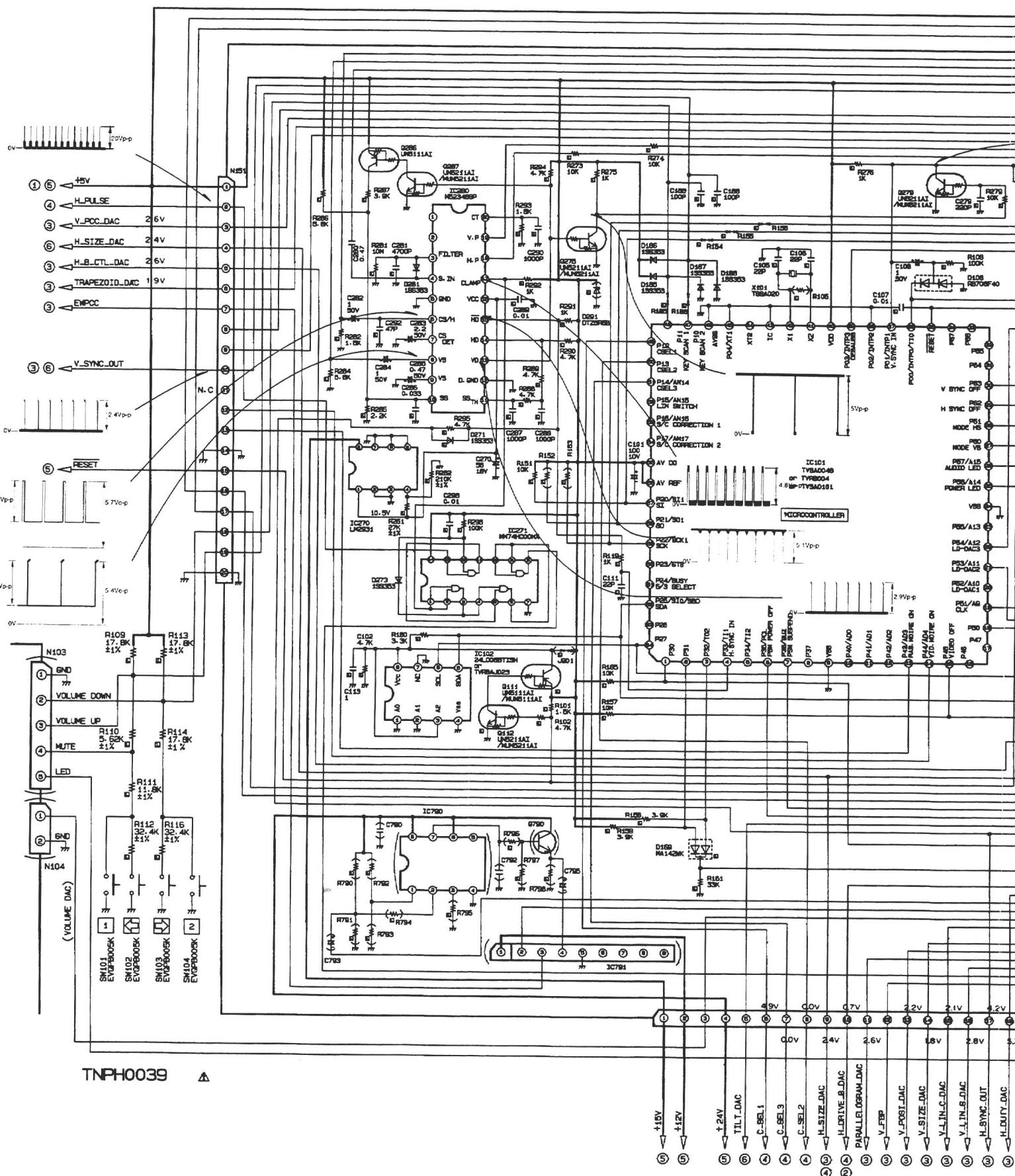
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1



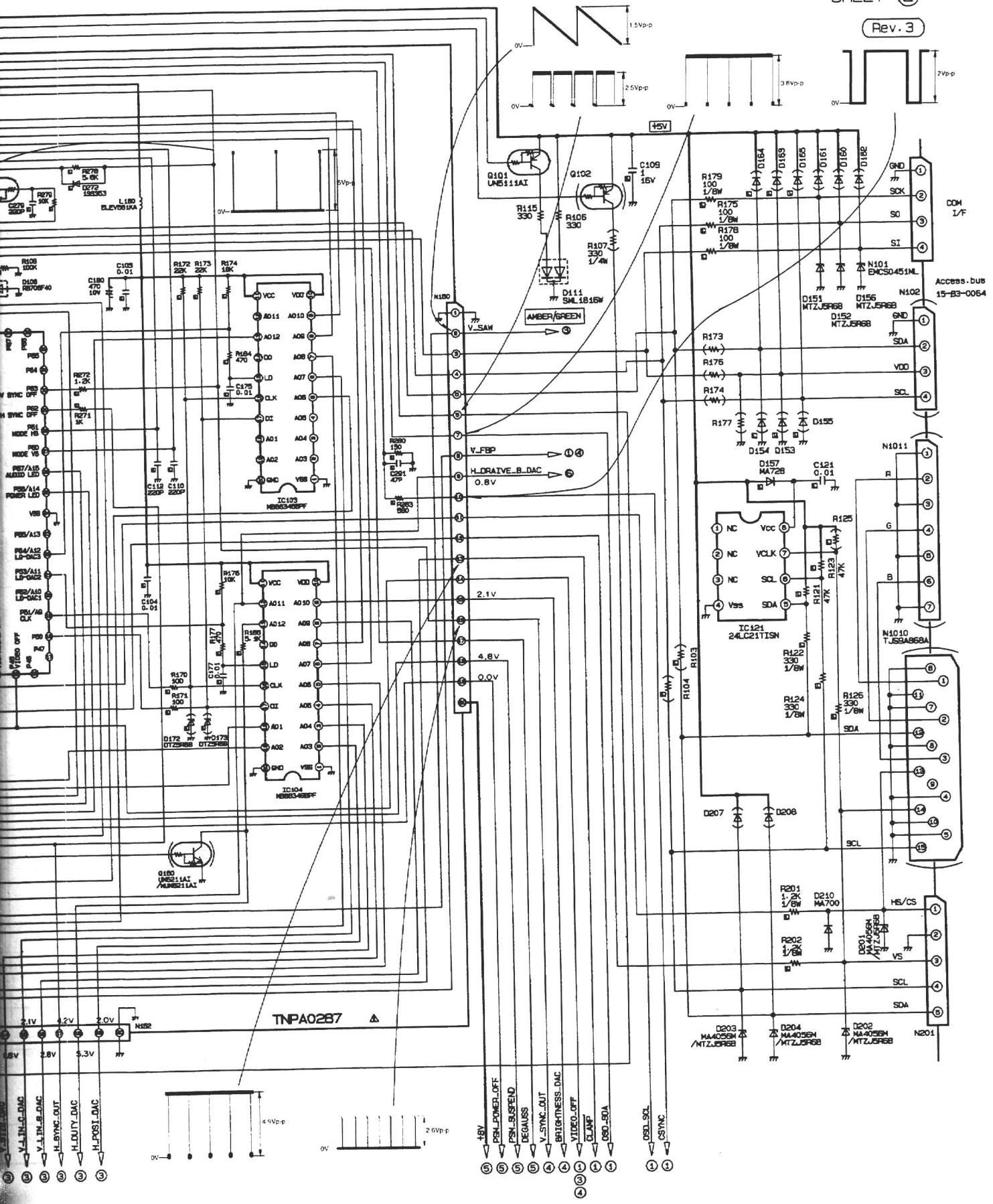
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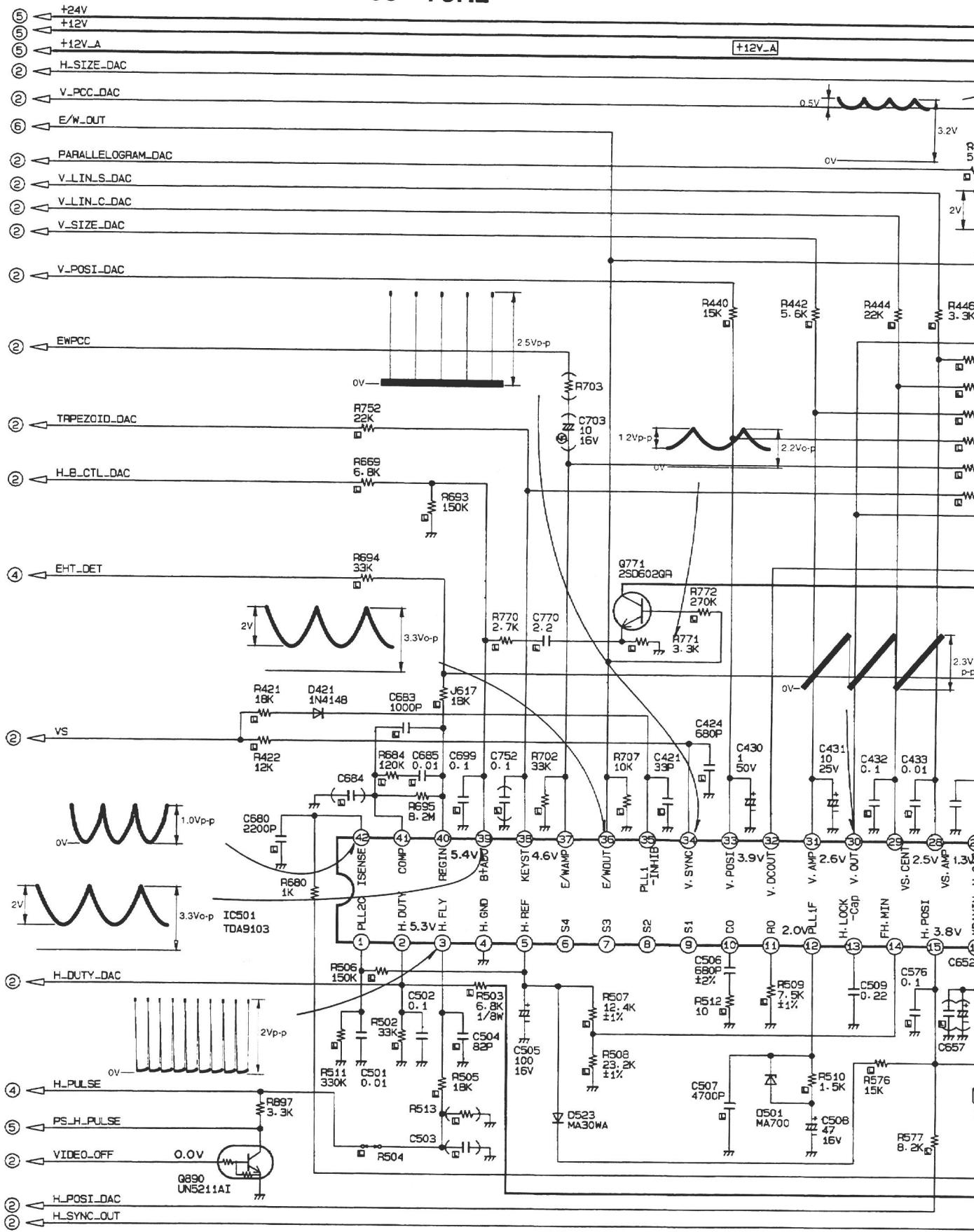
TNPH0039

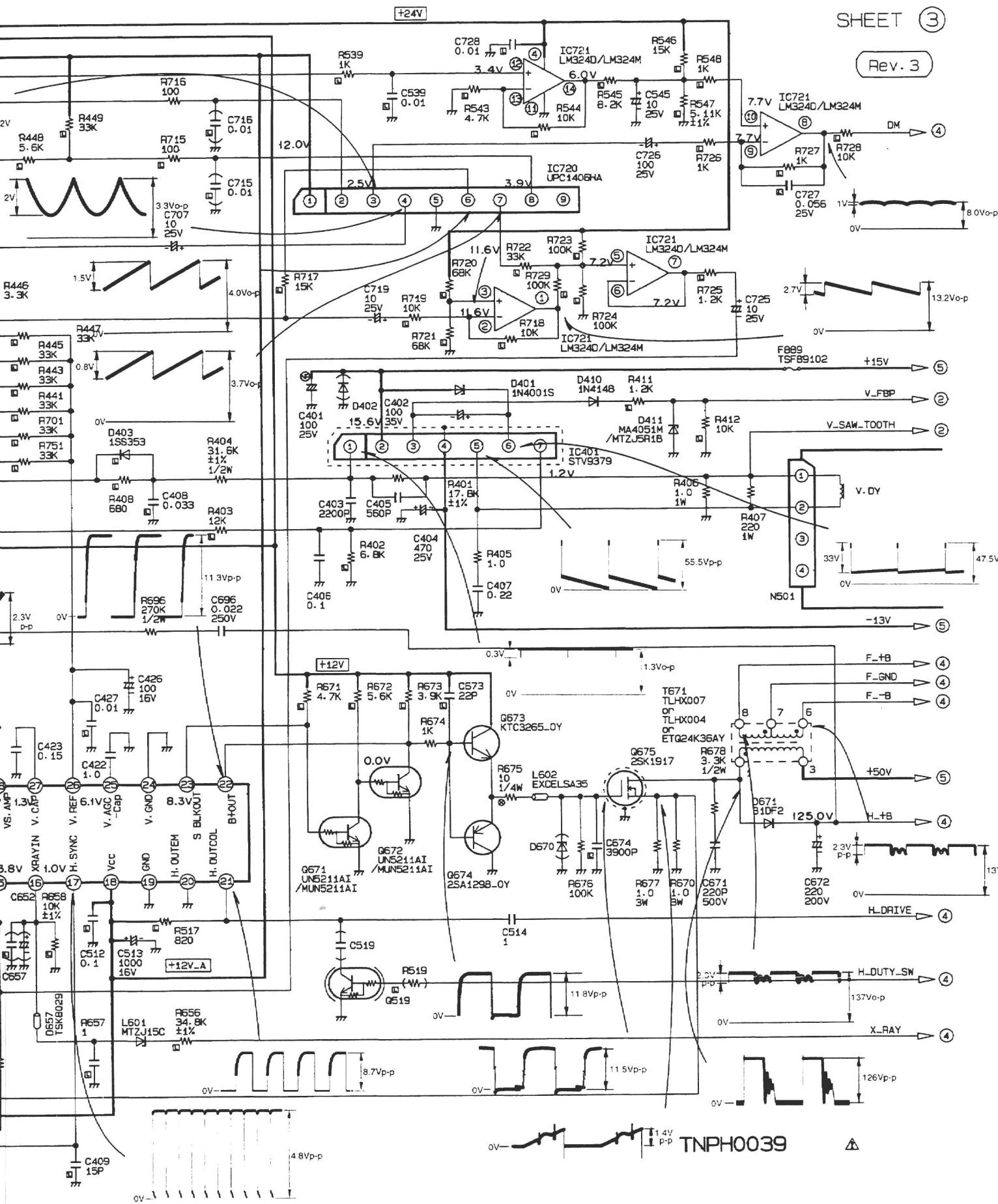
SHEET ②

Rev. 3

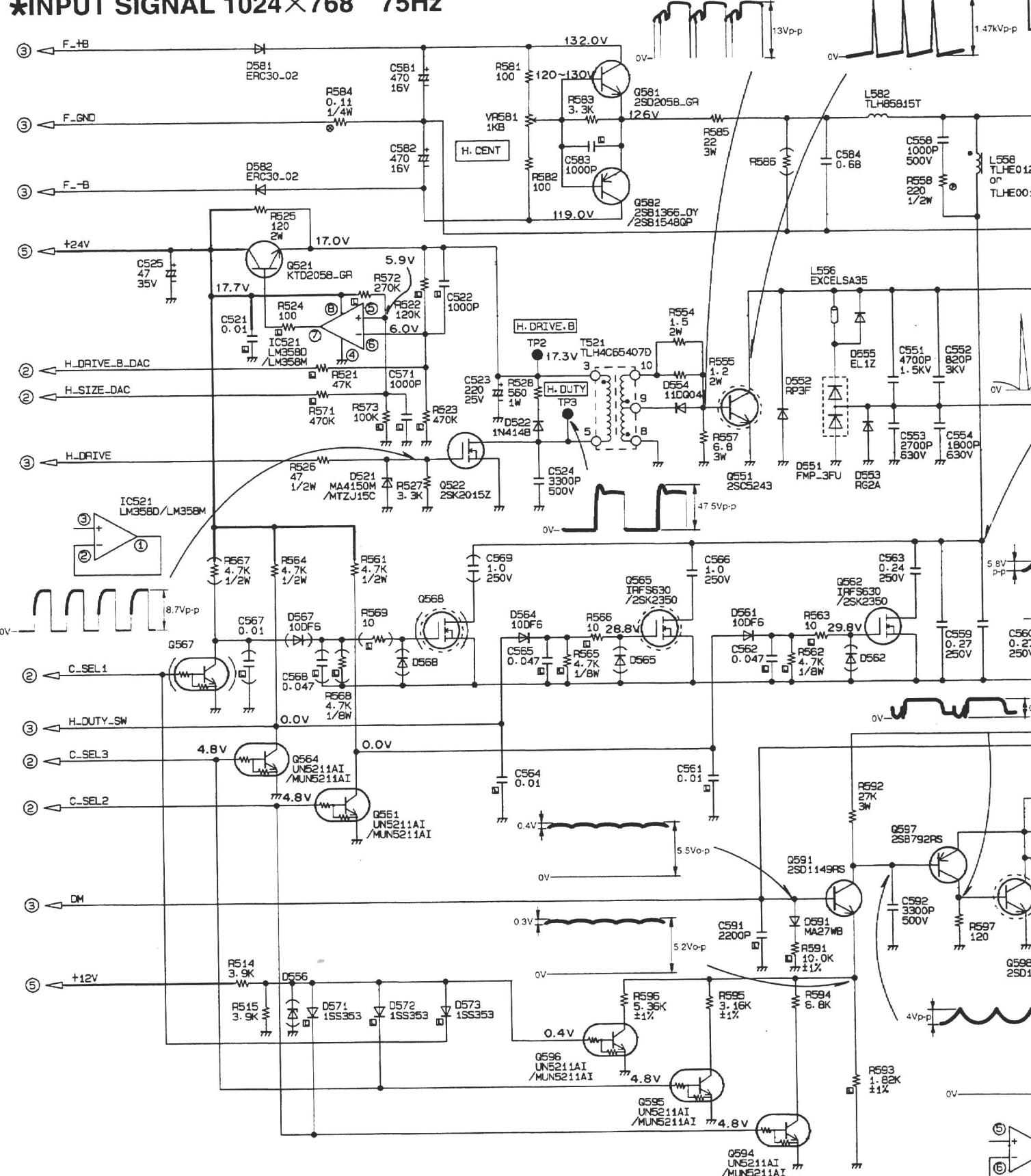


*INPUT SIGNAL 1024×768 75Hz





*INPUT SIGNAL 1024×768 75Hz



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